



STUDIES

A SPECIAL REPORT SERIES BY THE N.C. DEPARTMENT OF HUMAN RESOURCES, DIVISION OF HEALTH SERVICES, STATE CENTER FOR HEALTH STATISTICS, P.O. BOX 2091, RALEIGH, N.C. 27602

No. 47

December, 1988

OCCUPATIONAL MORTALITY AMONG NORTH CAROLINA MALES 1984-1986: A DEATH RATE ANALYSIS

N.C. DOCUMENTS
CLEARINGHOUSE

FEB 16 1989

N.C. STATE LIBRARY
RALEIGH

by

Kathryn B. Surles
Paul W. C. Johnson
Paul A. Buescher
Kenneth P. Kaufman

The authors gratefully acknowledge the expert assistance of Dr. Michael J. Symons who is a member of the faculty of the Department of Biostatistics, School of Public Health, University of North Carolina, Chapel Hill.

ABSTRACT

Following extensive investigation of the various methods of analysis, age-specific and age-adjusted death rates and rate ratios were produced for the most detailed categories of occupation, industry, and cause of death considered feasible for the size of the database. Results reveal patterns of high mortality risk among male workers in lower status jobs as well as proprietors and supervisors in sales. High risk was observed among workers in such industries as primary iron and steel, automotive and repair services, logging, construction, eating and drinking places, and trucking. In general, low risk was observed among executives, administrators, managers, and professionals and in such industries as textile mill products except yarn/thread/fabric, wholesale trade, colleges and universities, general merchandise stores, and health services except hospitals, among others.

This study's findings are, in general, like those of other studies in terms of a clear socio-economic mortality gradient. For most occupation and industry groups, the results are quite similar to those of a recent California study which, like North Carolina, identified a pattern of high risk among proprietors and supervisors in sales as well as workers in lower status jobs.

The study concludes with a list of seven recommendations for actions that would enhance the study of occupational mortality in North Carolina.

PREFACE

USEFULNESS OF THE DATA

Deficiencies of mortality data for studying health differentials by occupation include the small number of events available for study and the limited potential for identifying associations because of long latency periods. As always, accuracy of the underlying cause of death is also a concern. Certain other data and analytical limitations are also addressed in this report. Nevertheless, this body of data should prove useful in the generation of hypotheses to be tested by more rigorous statistical methods as well as hypotheses leading to new areas of clinical research in occupational epidemiology.

In defining such hypotheses, attention should be given to the following: the magnitude of the association of the occupation with a given disease, the consistency of the association with previous studies, the biological plausibility of the association, the presence or absence of a dose-response relationship, and the presence of suspected or known risk factors in the occupations at excess risk. Additionally, the "public health significance" of an association must be assessed. This involves determinations of the size of the population of affected workers, the magnitude of the risk suffered by exposed workers, the distribution of the suspected etiological agent or risk factor, and the degree to which the insult could be prevented. Policymakers may then begin to develop initiatives which seek risk reduction interventions that serve to minimize the worker's risk. (1)

North Carolina public use death tapes which contain demographic, cause of death, and occupation/industry codes for the years 1984-1987 are available at Triangle Universities Computation Center at Research Triangle Park. Researchers desiring documentation for these files should contact Paul Johnson at the State Center, (919) 733-4728, or address correspondence to:

State Center for Health Statistics
Division of Health Services
P.O. Box 2091
Raleigh, North Carolina 27602-2091

TABLE OF CONTENTS

	Page
Preface: Usefulness of the Data	ii
Introduction	1
Method of Analysis	1
The Coding Systems Used	2
Rate Ratio Computation and Significance Levels	2
Results	3
Results from Other Recent Studies	4
Discussion	4
Recommendations	5
References	10
Appendix I: Methods of Analysis in Occupational Mortality Studies	
Appendix II: Occupation, Industry and Cause of Death Classifications with Codes	
Appendix III: Formulas for the Determination of Significance Levels	
Appendix IV: Tables for Occupation Groups	
Appendix V: Tables for Industry Groups	



Digitized by the Internet Archive
in 2011 with funding from
State Library of North Carolina

INTRODUCTION

As the result of a cooperative agreement between the State Center for Health Statistics (SCHS) and the National Institute for Occupational Safety and Health (NIOSH), the coding of "usual lifetime occupation" and the corresponding industry on the death certificates of N.C. residents ages 20 and older was complete for death years 1984 through 1986 at the time this study began. The death certificates for females were also coded, but the present effort includes only males because, by and large, the exposure time of females in the labor force has been relatively limited. In the near future, the data for females will be analyzed as deemed appropriate, i.e., mortality within a few selected occupations will be examined. These would include school teachers, nurses, waitresses, cashiers, sales clerks, and other traditionally female-intense occupations.

The quality of North Carolina's occupation and industry data has been greatly enhanced by the outstanding cooperation of funeral directors across the state. Following a series of 18 educational workshops conducted during the spring of 1984, the Vital Records Branch continues to monitor the occupation and industry reporting on death certificates to ensure complete, accurate, and specific information. The cooperation of the state's funeral directors is gratefully acknowledged.

Though the cooperative agreement between the SCHS and NIOSH expired at the end of July 1986, it is expected that the coding of occupation and industry items on the death certificate will be continued. Currently, the National Center for Health Statistics is funding a position for that purpose.

As additional data years accrue, more detailed categories of occupation, industry, and underlying cause of death can be analyzed. However, our method of analysis, described below, may preclude the reporting of data for the late eighties until occupation and industry population counts are available from the 1990 Census, allowing for 1980 to 1990 interpolations of population bases. Dissimilarities between the occupation classifications used in the 1970 and 1980 censuses do not allow for extrapolations of population bases for the inter-censal years of the 1980s.

METHOD OF ANALYSIS

In contrast to other occupational studies recently reported in the United States, our choice of analytic tools are age-specific and age-adjusted death rates, adjustment by the direct method. Reasons for this preference are given in Appendix I, and the user is encouraged to read it in order to understand our preference for this methodology. Meanwhile, these definitions apply:

Numerator: Number of male decedents according to "usual" occupation during most of working life, ages 40-49, 50-59, 60-64, or 65-69 at time of death in 1984-86.

Denominator: Number of males, an average 5 years younger in 1980, who reported the specified occupation in the 1980 census. This was obtained by applying to the 1984-86 age-specific male population the percentage of the 1980 cohort 5 years younger who reported the occupation. For non-workers in 1980, last occupation (if any) during the previous 5 years was reportable. Thus, denominators are supposed to include employed persons as well as recently active workers not employed during the last week of March 1980.

The assumption here is that the "usual" lifetime occupation of persons dying in 1984-86 was likely to have been their "last" occupation between 1975 and March 1980 so that numerators and denominators would be consistent. By limiting the study to persons 40-69 at death (35-64 at Census), this assumption seems less risky than some of the weaknesses associated with other methods as discussed in Appendix I. The occupation and industry items for these ages are also likely to be more complete and the causes of death more definitive than for older decedents.

The death rates so computed, however, are not without their biases. The "worst case" appeared to be that for farmers, with numerators being disproportionately large compared to the corresponding denominators. Upon finding that the percentage of males reported as farmers or farmworkers dropped

significantly between the 1970 and 1980 censuses (30-44% in each of four age groups), the decision was made to delete the category "Farming, Forestry, and Fishing" from analysis. Although the downturn in farm occupations likely increased the denominators for some other occupations, the extent to which that occurred is unknown. Naturally, those occurrences would serve to artificially deflate some death rates.

Another potentially significant problem associated with the use of death rates is lack of specificity in death certificate nomenclature relative to that reported in the census. The "worst case" here would probably be that for laborers, not elsewhere classified. Many laborer deaths fall into this category whereas, in the Census, laborers are more likely to be assigned to a specific type rather than to this residual category. At the same time, that category of workers includes a disproportionate number of nonwhites (37% versus 18% of total employed males); thus, the excessive risk observed here may to some extent be real.

As more years of data accumulate, rates specific and/or adjusted for race as well as age should be computed. At present, however, small numbers preclude the racial analysis (or adjustment) for most causes of death, and therefore, the rates observed here measure absolute risk, *whether due to the "force of mortality" in an occupation or industry group or due to a racial mix that is associated with mortality risk factors* (e.g., socio-economic status, lifestyle practices, and access to medical care.)

In addition to the problems noted above, other factors contributing to biases in death rates would include:

- a. Pre-1980 layoffs and business foreclosures;
- b. Post-1980 in-migration of workers;
- c. Census respondents tending to report themselves in more elite occupations than were actually the case with compensating deflation of some denominators;
- d. Survivors tending to "improve" the decedent's occupational status, affecting death certificate reporting;
- e. The possibility that a decedent's usual occupation was not his last (if any) between 1975 and 1980 due to job limitations imposed by his illness or injury.

- f. Some less skilled occupation groups are likely to have a disproportionate influx of older workers, making the usual and last occupation quite different.

THE CODING SYSTEMS USED

The *Standard Occupational Classification* (2) and the *Standard Industrial Classification* (3) were utilized. These were also used by the Bureau of the Census in 1980.

Originally, numerators and denominators for 140 civilian occupations and 88 civilian industries were obtained. After deletion of farming, forestry and fishing occupations and the identification of occupations and industries for which small numbers of deaths precluded rate publication, age-specific and age-adjusted rates were computed for 48 hierarchical occupation groups, 44 hierarchical industry groups, and total males for whom a usual occupation was reported on the death certificate. The result was the use of occupation and industry groups for which total male deaths during 1984-86 numbered 141 or greater.

The coding of underlying cause of death was by the 9th Revision of the *International Classification of Diseases*. A total of 33 hierarchical cause categories, including 15 cancer sites, were utilized. However, due to extremely small numbers, only 19 cause groups including 5 cancer sites are reported here (causes and sites for which total deaths exceeded 300).

The occupation, industry, and cause of death classifications and the corresponding codes used in this report are detailed in Appendix II.

RATE RATIO COMPUTATION AND SIGNIFICANCE LEVELS

The rate ratio computation used in this report is the ratio resulting from dividing the age-specific or age-adjusted rate for the occupation (industry) group by the corresponding rate for all other employed civilian males in nonagricultural occupations. The age-specific rate ratios are not printed if the number of age-specific deaths was fewer than 10. The age-adjusted rate ratio is always printed, but users should assess these in light of the number of age groups involving fewer than 10 deaths. The 1984-86 civilian male population employed in nonagricultural jobs was the standard used for direct age-adjustment.

To assist users in the assessment of rates, we have used a linearized Taylor series approach to estimating the variance of the ratio of two rates to identify ratios that are significantly different from 1.00. Asterisks identify age-specific and age-adjusted ratios that are significantly higher or lower than 1.00 according to 2 levels of significance: $p < .01$ and $p < .001$. These symbols indicate the probability (p) that the rate differential occurred entirely by chance, i.e., $p < 1\%$ or $p < 0.1\%$. Due to the large number of associations examined, the reader may expect that some "significant" ones will have occurred by chance alone. Others may be due to under- or over-estimation of the population at risk.

Formulas for determining the significance level of a rate ratio are provided in Appendix III.

RESULTS

In the computerized tables of Appendices IV and V, age-specific and age-adjusted rate ratios are given for 48 hierarchical occupation groups and 44 hierarchical industry groups. Recall that the age-specific rate ratios are not printed if based on fewer than 10 deaths, and each age-adjusted rate ratio should be assessed in consideration of the total number of deaths and the number of age groups involving fewer than 10 deaths. The age-specific total deaths and population estimates used to calculate the age-specific and age-adjusted rates were:

AGE GROUP	1984-86 TOTAL DEATHS ¹	1984-86 ESTIMATED POPULATION ²
40-49	4,810	859,392
50-59	10,653	673,223
60-64	9,313	267,760
65-69	11,029	161,811
All Ages 40-69	35,805	1,962,186

¹Males employed in civilian nonagricultural occupations "during most of working life."

²Males who were 5 years younger in 1980 and reported working their current or last job in civilian nonagricultural occupations (includes nonworkers in 1980 who worked anytime during the previous 5 years).

In terms of the causes examined, deaths among usually employed males numbered as follows: Total Diseases of the Heart (13,849), Acute Myocardial Infarction (6,750), Other Ischemic Heart Disease (3,785), Other Diseases of Heart (3,314), Cerebrovascular Disease (1,707), Total Cancer (9,581),

Cancer of the Esophagus (337), Cancer of the Colon/Rectum/Anus (739), Cancer of the Pancreas (479), Cancer of the Trachea/Bronchus/Lung (4,269), Cancer of the Prostate (519), Diabetes Mellitus (519), Pneumonia and Influenza (658), Chronic Obstructive Pulmonary Disease (1,262), Chronic Liver Disease and Cirrhosis (849), Motor Vehicle Accidents (818), Other Accidents and Adverse Effects (1,055), Suicide (755), and Homicide (380). Total 1984-86 deaths among males employed in civilian nonagricultural occupations during most of working life numbered 35,805.

Examining the results for occupation groups (Appendix IV), one quickly observes quite disparate results across most of the causes of death: very low rate ratios for executives, administrators, managers, and professionals and elevated rate ratios for sales supervisors and proprietors and a number of "blue collar" occupations, especially carpenters and construction and other laborers. To what extent these results may reflect over- and under-estimation of the populations used in rate calculations is unknown, but it is not expected that estimation problems could account for such wide disparities as those observed.

For those occupations exhibiting significantly high age-adjusted rate ratios, Table 1 (page 6) summarizes the results. While we have shown these results for occupation-cause groups involving 10 or more total deaths, users should be especially wary of rate ratios based on fewer than 20 deaths. Even then, chance random fluctuation may be the primary contributor to a significantly high result.

As shown in Table 1, heart disease, total cancer, lung cancer and chronic obstructive pulmonary disease were the causes most frequently involved in significant excess mortality. Only laborers exhibited significant excess mortality from chronic liver disease and cirrhosis. Significant excesses in motor vehicle fatality were found among carpenters, painters, motor vehicle operators, and laborers while excesses in other types of accidental fatality were observed among cooks, cleaning and building service workers, carpenters, and laborers. Only sales supervisors and proprietors exhibited a significant excess in suicide while excessive homicide was observed among sales supervisors and proprietors, carpenters, and laborers. Note in the detailed tables of Appendix IV, however, that the results for suicide and homicide involve fewer than 10 deaths in most age groups.

Eleven of the 30 mutually exclusive occupation groups examined had significantly high ($p < .001$) age-adjusted rate ratios for total deaths. Those are depicted in Figure 1 (page 7) where they are compared with the eleven lowest statistically significant age-adjusted rate ratios (of the 30 mutually exclusive occupation groups). The range in these rate ratios is .38 to 2.97.

Based on the detailed tables of Appendix V, Table 2 (page 8) summarizes the results for industry-cause groups involving 10 or more deaths and exhibiting significantly high age-adjusted rate ratios. Eleven out of 37 mutually exclusive industries are represented, with elevated ratios most frequently found in construction and in automotive repair and services. Some of the higher ratios are found among workers in primary iron and steel industries. These high ratios are found to involve cardiovascular causes, total cancer, and lung cancer.

Eight of the 37 mutually exclusive industries examined had significantly high age-adjusted rate ratios for total deaths. These are depicted in Figure 2 (page 9) where they are compared with the eight lowest statistically significant age-adjusted rate ratios. The range in these rate ratios is .29 to 3.11.

Finally, a word of caution is that, when there is lack of proportional risk across age groups as cited in the female teacher example of Appendix I, one should be cautious in interpreting the age-adjusted rate ratio. In that case, the rate ratio of 1.32 involved high risks at the older ages only, and it would be important to point that out.

RESULTS FROM OTHER RECENT STUDIES

The following results from other recent studies may be of interest as they relate to the N.C. findings:

- In the Whitehall study (4), 17,530 civil servants were classified according to employment grade, and their mortality was recorded over a 10-year period. A steep inverse relationship between grade and mortality was observed. Compared with the highest grade (administrators), men in the lowest grade had 3 times the mortality rate from coronary heart disease, from a range of other causes, and from all causes combined. Smoking and other coronary risk factors are more common in the lower grades, but these differences were said to account for only part of the mortality difference.
- In a retrospective study of 10,128 deaths to male municipal workers in Buffalo, New York (5), all-cause mortality was significantly lower than expected for professionals, managers, and clerical workers. White-collar workers exhibited a decreased risk of death from all diseases of the circulatory and respiratory systems and all external causes of death. Blue-collar workers exhibited statistically significant increases for cancer.
- Workers in transport have been found to be at high risk of death from diseases related to body malfunction, including heart disease (6). In that study, it is shown that significant changes in the blood take place when driving a motor vehicle.
- Productivity losses due to illness, disability, and premature death for the economically active population in Finland in 1975 have been examined (7). Losses for males in agriculture and industry were almost 3 times higher than for males in administration.
- A study in Denmark (8) showed that male unskilled and semi-skilled workers had excess mortality in younger age groups which decreased with increasing age. The North Carolina data for "handlers, equipment cleaners, helpers and laborers" and its sub-categories are consistent with the Denmark findings.
- A report of California occupational mortality for the years 1979-81 (9) revealed a general pattern of high risk among proprietors and supervisors in sales as well as helpers and laborers, truck drivers, and the construction trades, among others. Patterns of high risk among black males occurred among helpers and laborers, the construction trades, truck drivers, and others. For all races combined, patterns of high risk among males occurred in industries such as construction, logging, lumber mills, trucking, eating and drinking, and auto repair, among others. Age-adjusted standardized mortality ratios (SMRs) were used in this study which also revealed low mortality risk among male managers and professionals.

The above and numerous other studies have assessed occupational mortality risk for occupation groups not singled out in the North Carolina study. The California study (9) involved many more deaths, and results are presented for race-sex groups and for more specific occupations and industries. In general,

however, the North Carolina findings are similar to those observed in California. This may not be surprising since the death rate directly adjusted for age and the age-adjusted SMR generally yield similar results. An exception to this and an example are given in Appendix I. Given the general case, however, the similarity of results in N.C. and California are comforting in that our methodology for estimating population bases tends to be supported.

DISCUSSION

Due to the statistical problem of small numbers, results of this study are much less definitive than desired. It is a start, however, and it is hoped that the coding of occupation and industry on death certificates will continue. With larger numbers, a race-sex-specific analysis can be undertaken as soon as occupation and industry results of the 1990 Census become available. Since the 1990 Census will use the same classification system as that used in 1980, interpolations and extrapolations of the census denominators will be possible. Extrapolation was not possible in the present study since a different occupation classification scheme was utilized in the 1970 Census.

As observed in California, the large number of significantly high rate ratios for male laborers and other blue collar workers may not reflect occupational factors as much as low socio-economic status and the related conditions of unhealthy lifestyle factors and poor medical care. The excess risk among laborers for cancer of the esophagus, cirrhosis, and homicide suggests higher alcohol consumption in these groups. The lower but still significantly high rate ratios for male proprietors and supervisors in sales is not so readily explained but could possibly involve personality type and/or stress associated with ownership and supervision in sales where quotas must be met if a business is not to fail. It is seen also that the high rate ratios for other ischemic heart disease, colon cancer, suicide and homicide among proprietors and supervisors in sales involve small numbers in the age-specific cells.

The reader will note that many of the rate ratios for total deaths and the larger cause-of-death groups have asterisks indicating statistical significance. Since a small deviation of a ratio from 1.00 may be

statistically significant where very large numbers are involved, the practical significance or magnitude of the rate ratio should also be considered.

RECOMMENDATIONS

- Continue to code occupation and industry items on the death certificate. As the database builds in numbers, more definitive analyses of associations between occupation and cause-specific mortality can be undertaken.
- Through the routine contacts of the Vital Records Branch with county registrars, funeral directors, and physicians and through a regular query program for nonspecific entries on the death certificate, continue to monitor and improve the quality of the occupation and industry data reported.
- Determine and implement a means of providing education to physicians on the reporting of specific causes of death on the death certificate.
- Conduct further analysis and comparisons with the results of other occupational mortality studies, refining the cause of death and occupational categories and analyzing race-sex-specific data as the numbers accrue. Analysis utilizing all medical conditions mentioned on death certificates (as opposed to underlying cause of death only) should be considered.
- Explore the feasibility of adding to the death certificate items related to the decedent's history of tobacco and alcohol use. Such items pertaining to maternal use during pregnancy were added to the North Carolina birth certificate in 1988.
- Explore the possibility of having hospitals collect information on a patient's usual lifetime occupation in order to create occupational morbidity databases through the North Carolina Cancer Registry and other hospital discharge files.
- Explore the possibility of having hospitals collect information on the occupations of a newborn's parents in order to conduct studies of newborn morbidity as related to possible teratogens and carcinogens in the workplace.

TABLE 1

**SIGNIFICANTLY HIGH AGE-ADJUSTED RATE RATIOS¹ SHOWING NUMBERS OF DEATHS (10 OR MORE)
BY OCCUPATION OF DECEDENT AND CAUSE OF DEATH
NORTH CAROLINA MALES 1984-86**

Underlying Cause of Death	Supervisors and Proprietors, Sales	Cooks excluding Private Households	Cleaning and Building Service Workers, excluding Households	Auto Mechanics, including Body	Carpenters	Painters, Construc- tion and Maintenance	Plumbers Pipefitters and Steamfitters	Machinists	Textile Machine Operators	Motor Vehicle Operators ²	Construc- tion Laborers	Laborers, excluding Construc- tion
	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio	No. Ratio
Total Deaths	1296 1.36 ⁴	258 1.66 ⁴		777 1.23 ⁴	1215 1.34 ⁴	514 1.57 ⁴	348 1.39 ⁴	422 1.84 ⁴	945 1.20 ⁴	2155 1.09 ⁴	829 2.09 ⁴	1724 2.97 ⁴
Heart Disease	523 1.41 ⁴			289 1.19 ³	440 1.24 ⁴	161 1.26 ³	131 1.37 ⁴	147 1.66 ⁴	394 1.28 ⁴	849 1.12 ³	227 1.80 ⁴	611 2.67 ⁴
Acute Myocardial Infarction	273 1.53 ⁴				213 1.24 ³			71 1.65 ⁴	207 1.38 ⁴		106 1.41 ⁴	260 2.33 ⁴
Other Forms of Ischemic Heart Disease	148 1.46 ⁴						44 1.67 ⁴	43 1.80 ⁴			83 1.98 ⁴	138 2.18 ⁴
Other Diseases of the Heart					109 1.31 ³					216 1.20 ³	88 2.39 ⁴	213 3.96 ⁴
Cerebrovascular Disease		17 2.18 ³			65 1.52 ³			27 2.49 ⁴			39 2.04 ⁴	105 3.74 ⁴
Total Cancer	378 1.47 ⁴	66 1.54 ⁴		204 1.21 ³	319 1.28 ⁴	142 1.62 ⁴		128 2.10 ⁴	253 1.21 ³		206 1.92 ⁴	417 2.63 ⁴
Esophagus											14 3.75 ⁴	33 6.37 ⁴
Colon, Rectum, Anus	33 1.70 ³							11 2.34 ⁴				
Pancreas												
Trachea, Bronchus, Lung	177 1.55 ⁴			108 1.48 ⁴	171 1.54 ⁴	83 2.15 ⁴		58 2.13 ⁴	125 1.33 ³			
Prostate												
Diabetes Mellitus		10 4.32 ⁴						11 3.30 ⁴				
Pneumonia and Influenza		11 3.91 ⁴				15 2.30 ³	10 2.31 ³					
Chronic Obstructive Pulmonary Disease				36 1.62 ³	67 2.04 ⁴	33 2.73 ⁴	19 2.13 ³	18 2.27 ⁴			28 3.92 ⁴	32 3.82 ⁴
Chronic Liver Disease and Cirrhosis												32 2.93 ⁴
Motor Vehicle Accidents												53 2.38 ⁴
All Other Accidents and Adverse Effects		12 2.70 ⁴	52 1.62 ³		33 1.81 ⁴	20 2.89 ⁴				94 2.01 ⁴	23 2.45 ⁴	45 3.53 ⁴
Suicide	32 1.69 ³				41 1.65 ³						26 2.89 ⁴	44 3.77 ⁴
Homicide	18 1.95 ³				22 2.71 ⁴						47 4.12 ⁴	72 4.51 ⁴
											17 4.14 ⁴	35 6.82 ⁴

¹Age-adjusted rate for occupation group divided by age-adjusted rate for all other employed civilians in nonagricultural occupations.

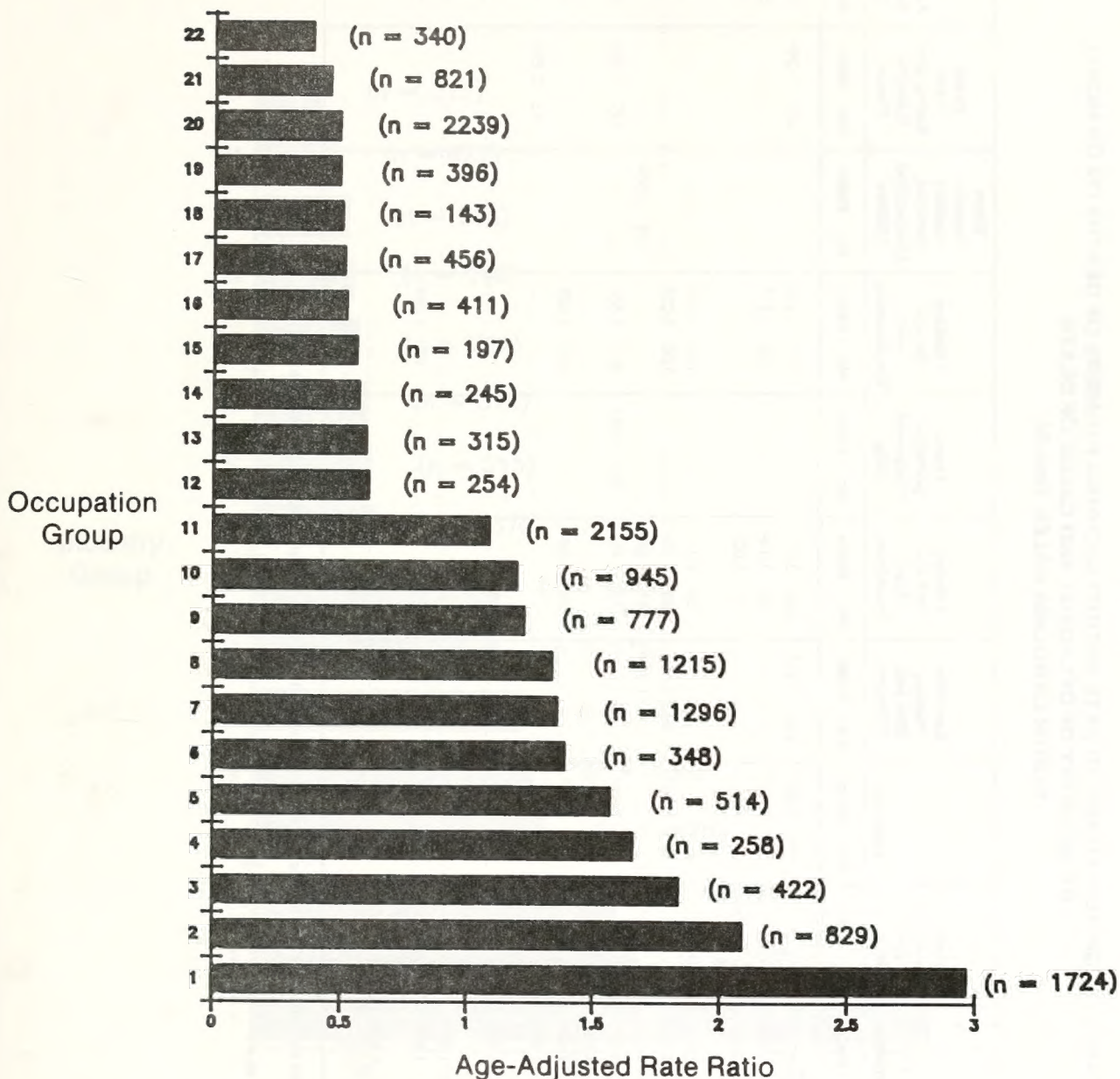
²More specifically, Truck Drivers and Driver/Sales Workers had a motor vehicle death rate ratio of 2.14⁴ (92 deaths), but this was their only significant excess.

³p < .01

⁴p < .001

NOTE: In the case of significant results for more than one level of the hierarchical occupation groups, results for the most specific occupation are shown. The one exception is noted in footnote 2 above.

Figure 1
CIVILIAN NONAGRICULTURAL OCCUPATION GROUPS HAVING
THE HIGHEST AND LOWEST STATISTICALLY SIGNIFICANT
AGE-ADJUSTED RATE RATIOS* FOR DEATHS FROM ALL CAUSES
NORTH CAROLINA MALES, 1984-1986



- 1 Laborers excluding Construction
- 2 Construction Laborers
- 3 Machinists
- 4 Cooks excluding Private Households
- 5 Painters, Construction and Maintenance
- 6 Plumbers/Pipefitters/Steamfitters
- 7 Supervisors and Proprietors, Sales
- 8 Carpenters
- 9 Auto Mechanics including Body
- 10 Textile Machine Operators
- 11 Motor Vehicle Operators

- 12 Religious Workers
- 13 Traffic/Shipping/Stock/Inventory Clerks
- 14 Mail and Message Distributors
- 15 Assemblers
- 16 Sales Representatives, Finance/Business Services
- 17 Management-Related Occupations
- 18 Engineering and Science Technicians
- 19 Teachers, Librarians and Counselors
- 20 Managers and Administrators
- 21 Supervisors, Production Workers
- 22 Sales Representatives, Commodities excluding Retail

*Age-adjusted rate for the occupation group divided by age-adjusted rate of all other employed civilians in non-agricultural occupations.

TABLE 2

**SIGNIFICANTLY HIGH AGE-ADJUSTED RATE RATIOS¹ SHOWING NUMBERS OF DEATHS (10 OR MORE)
BY INDUSTRY OF DECEDENT AND CAUSE OF DEATH
NORTH CAROLINA MALES 1984-86**

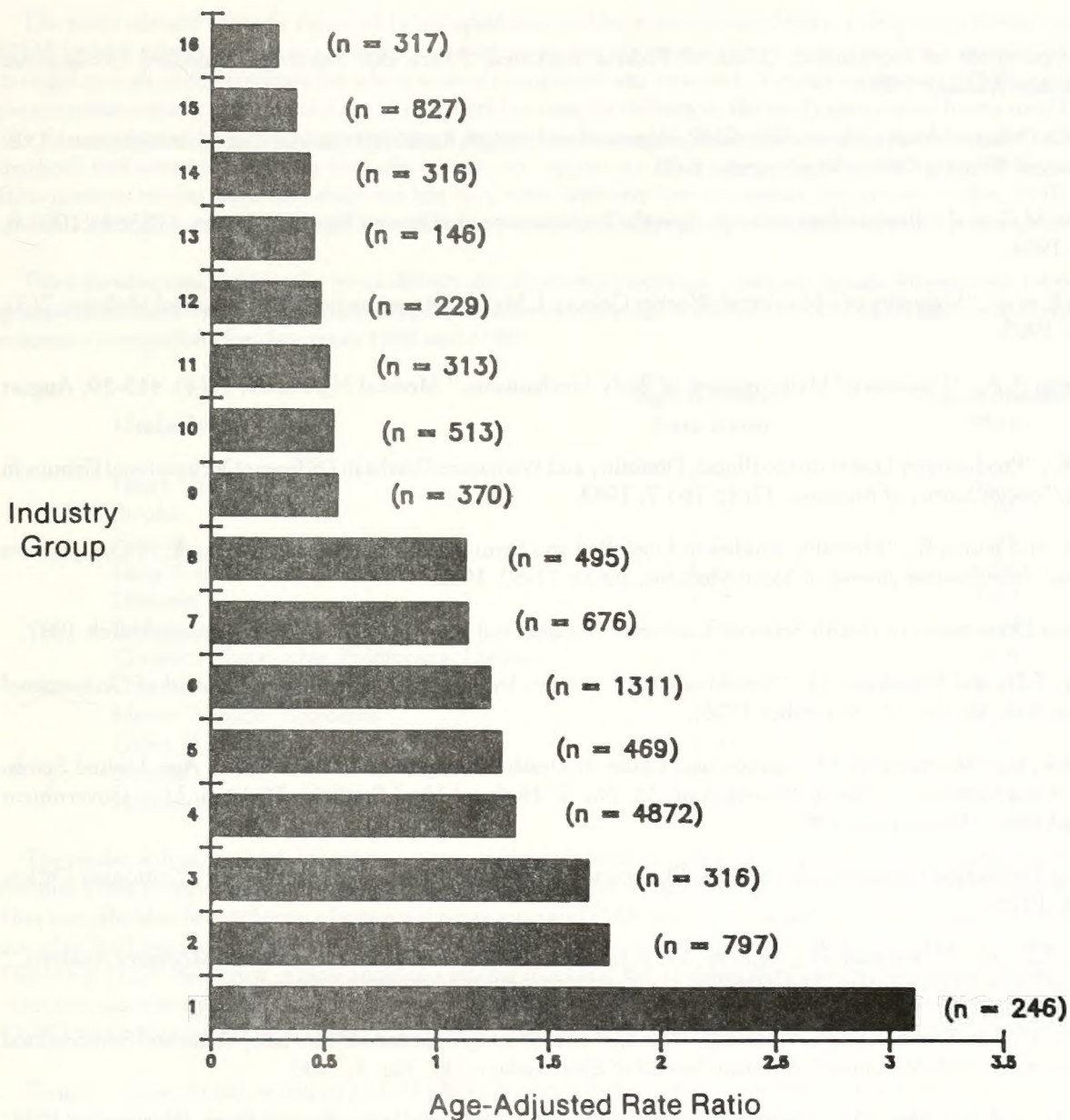
Underlying Cause of Death	Construction		Yarn, Thread and Fabric Mills		Logging		Sawmills, Planing Mills and Millwork		Primary Iron and Steel Industries		Trans- portation Equipment Mfg.		Trucking Service and Warehousing		Water Supply, Sanitary Services, Unspecified Utilities		Retail Trade Eating and Drinking Places		Automotive Repair and Services		Personal Services	
	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio
Total Deaths	4872	1.35 ³					495	1.13 ²	246	3.11 ³			1311	1.24 ³			469	1.29 ³	797	1.77 ³	676	1.14 ³
Heart Disease	1740	1.24 ³							98	3.14 ³			510	1.27 ³					295	1.70 ³		
Acute Myocardial Infarction	782	1.13 ²							47	3.03 ³									142	1.68 ³		
Other Forms of Ischemic Heart Disease	505	1.33 ³							23	2.72 ³			143	1.35 ³					84	1.78 ³		
Other Diseases of the Heart	453	1.36 ³							28	3.85 ³			126	1.33 ²					69	1.66 ³		
Cerebrovascular Disease	228	1.32 ³							11	2.95 ³												
Total Cancer	1284	1.34 ³							73	3.45 ³	92	1.35 ²	367	1.33 ³					220	1.82 ³		
Esophagus	54	1.65 ³																				
Trachea, Bronchus, Lung	614	1.45 ³							29	3.06 ³			183	1.52 ³					113	2.12 ³		
Pneumonia and Influenza	114	1.80 ³																	18	2.17 ²		
Chronic Obstructive Pulmonary Disease	203	1.66 ³																	30	1.87 ³		
Chronic Liver Disease and Cirrhosis	134	1.59 ³																				
Motor Vehicle Accidents	133	1.64 ³											64	2.28 ³					25	2.36 ³	23	1.98 ²
All Other Accidents and Adverse Effects	197	1.94 ³																	21	2.02 ²		
Homicide	84	2.37 ³																			15	2.82 ³

¹Age-adjusted rate for industry group divided by age-adjusted rate for all other employed civilians in nonagricultural occupations.

²p < .01

³p < .001

Figure 2
CIVILIAN NONAGRICULTURAL INDUSTRIES HAVING THE
HIGHEST AND LOWEST STATISTICALLY SIGNIFICANT
AGE-ADJUSTED RATE RATIOS* FOR DEATHS FROM ALL CAUSES
NORTH CAROLINA MALES, 1984-1986



- 1 Primary Iron and Steel Industries
- 2 Automotive and Repair Services
- 3 Logging
- 4 Construction
- 5 Retail Trade Eating and Drinking Places
- 6 Trucking Service and Warehousing
- 7 Personal Services
- 8 Sawmills, Planing Mills and Millwork

- 9 Social Services, Religious and Membership Organizations
- 10 Machinery excluding Electrical
- 11 Insurance
- 12 Health Services excluding Hospitals
- 13 General Merchandise Stores
- 14 Colleges and Universities
- 15 Wholesale Trade
- 16 Textile Mill Products excluding Yarn/Thread/Fabric

*Age-adjusted rate for the industry divided by age-adjusted rate of all other employed civilians in nonagricultural occupations.

REFERENCES

(Including those of Appendix I)

1. National Institute for Occupational Safety and Health, *Surveillance Cooperative Agreement Between NIOSH and States (SCANS) Program: Rhode Island 1980-82*, DHHS (NIOSH) Publication No. 86-107, Cincinnati, Ohio, February 1986.
2. U.S. Department of Commerce, Office of Federal Statistical Policy and Standards, *Standard Occupational Classification Manual*, 1980.
3. Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, U.S. Government Printing Office, Washington, 1972.
4. Marmot, M.G. et al., "Inequalities in Death: Specific Explanations of a General Pattern?" *Lancet*, 1 (8384): 1003-6, May 5, 1984.
5. Vena, J.E. et al., "Mortality of a Municipal Worker Cohort: I. Males," *American Journal of Industrial Medicine*, 7(3): 241-52, 1985.
6. Robinson, A.A., "Diseases of Malformation of Body Mechanisms," *Medical Hypotheses*, 11(4): 415-29, August 1983.
7. Vinni, K., "Productivity Losses due to Illness, Disability and Premature Deaths in Different Occupational Groups in Finland," *Social Science of Medicine*, 17(3): 163-7, 1983.
8. Lynge E. and Jeune, B., "Mortality Studies in Unskilled and Semi-Skilled Workers in Denmark: A Comparative Analysis," *Scandinavian Journal of Social Medicine*, 10(3): 77-80, 1982.
9. California Department of Health Services, *California Occupational Mortality 1979-81*, Sacramento, March 1987.
10. Sterling, T.D. and Weinkam, J.J., "Smoking Characteristics by Type of Employment," *Journal of Occupational Medicine*, Vol. 18, No. 11, November 1976.
11. Guralnick, L., "Mortality by Occupation and Cause of Death Among Men 20-64 Years of Age: United States, 1950," *Vital Statistics — Special Reports*, Vol. 53, No. 2, National Vital Statistics Division, U.S. Government Printing Office, Washington, 1962.
12. Office of Population Censuses and Surveys, *Occupational Mortality, 1970-72*. Her Majesty's Stationary Office, London, 1978.
13. Kupper, L.L., A.J. McMichael, M.J. Symons, and B.M. Most, "On the Utility of Proportional Mortality Analysis," *Journal of Chronic Disease*, Vol. 31, 1978.
14. Decoufle, P., T.L. Thomas, and L.W. Pickle, "Comparison of the Proportionate Mortality Ratio and Standardized Mortality Ratio Risk Measures," *American Journal of Epidemiology*, 111, No. 3, 1980.
15. Kan, S.H. and Brockert, J.E., "Proportional Mortality by Causes of Death Among Farm Workers in Utah, 1968-1978," Technical Report No. 0037, Utah Department of Health, Salt Lake City, June 1982.
16. Kitagawa, E.M. and Hauser, P.M., *Differential Mortality in the United States: A Study in Socioeconomic Epidemiology*, Harvard University Press, Cambridge, Mass., 1973.
17. Miettinen, O.S. and Wang, J-D., "An Alternative to the Proportionate Mortality Ratio," *American Journal of Epidemiology*, Vol. 114, No. 1, 1981.

APPENDIX I

METHODS OF ANALYSIS IN OCCUPATIONAL MORTALITY STUDIES

COMPARISONS OF DEATH RATES TO THE RESULTS OF OTHER METHODS

The main statistic recently reported in occupational studies in the United States is the proportionate mortality ratio (PMR) which relates a study group's proportional cause-specific mortality to that of a reference population, say all male decedents or all male decedents for whom a usual occupation was reported. A major weakness of PMR is that it does not permit measurement of the total force of mortality because, by definition, the study group must have a total PMR of 1.00. We thus conducted numerous comparisons of the results obtained by PMR to those using age-adjusted death rates (direct method) and were impressed by the large number of "apparent" false-negative results yielded by PMR. Some apparent false-positive results were also observed but they were relatively few in number. In contrast to this, PMR results were almost identical to results using age-adjusted rates where an occupation group exhibited mostly average mortality.

The following results for male "truck drivers and driver-sales workers" compare the age-adjusted rate ratio (occupation group rate divided by rate for all other employed males) and the age-adjusted PMR (using all other employed males as the reference population) for data years 1984 and 1985:

Underlying Cause	Age-Adjusted Rate Ratio	Age-Adjusted PMR
Heart Disease	1.32	1.02
Stroke	1.17	.86
Cancer	1.22	.94
Lung Cancer	1.25	.98
Diabetes	1.35	1.03
Pneumonia/Influenza	.79	.58
Chronic Obstructive Pulmonary Disease	1.32	1.04
Chronic Liver Disease and Cirrhosis	1.59	1.12
Motor Vehicle Accidents	2.87	2.25
Other Accidents	1.20	.90
Suicide	1.13	.87
Homicide	1.44	1.18

The reader will note a high correlation between the two indices; in fact, it is nearly perfect (Pearson's $r = .99$). This is because PMR is approximately equal to the cause-specific rate ratio divided by the rate ratio for all causes (a constant). However, the absolute difference between the rate ratio and PMR can be very large such that the rate ratio and PMR do not correlate well when comparing cause-specific risk across occupational categories. What happens, of course, is that a high PMR (e.g., 2.25 for motor vehicle accidents among truckers) forces other PMRs to be low though, in fact, the adjusted rates indicate elevated risk of death from a number of causes. Note the rate ratio versus the PMR for lung cancer and COPD; the rate ratios are much more in line with a high smoking prevalence rate among truckers (10) than are the PMRs.

Some U.S. and British studies (9,11,12) have previously reported the population-based standardized mortality ratio (SMR) where the expected number of deaths is derived by the indirect method of age-adjustment. Although the directly adjusted rate and the SMR generally yield similar results, discrepancies occur when there is a difference in population distributions across age groups. A lack of proportional risk across age groups may further accentuate differences. A convincing example of this involves North Carolina white female elementary school teacher cancer deaths in 1984. Though the age-specific risks by SMR and the rate ratio are by definition the same, the age-adjusted SMR of .97 compares to an age-adjusted rate ratio of 1.32, total white females as the standard. The age-specific risks are low at younger ages and high at older ages: .58 at ages 40-49, .50 at ages 50-59, 1.50 at ages 60-64, and 2.49 at ages 65-69. But the difference in the directly adjusted rate ratio and the SMR comes from the difference in population distribution by age for teachers versus all females. The fraction of teachers versus all females is 53 versus 36 percent at 40-49, 33 and 33 percent at 50-59, 9 versus 16 percent at 60-64 and 5 versus 14 percent at 65-69. Compare also the above age-specific rate ratios to these age-specific PMRs: 1.32, 1.15, 1.45, and 1.00 for the four successive age groups. The discordances are substantial.

On the basis of an approximately constant relationship between PMR and SMR (13,14), a study of Utah farm workers (15) approximated SMR by the conversion formula, $SMR(\text{specific cause}) = PMR(\text{specific cause}) \times SMR(\text{all causes})$, using the all-cause SMR of .82 estimated for farm workers in the U.S. in 1960 (16). While this approach may generally be an improvement over PMR itself, the conversion will not be a satisfactory measure of risk uniformly as can be demonstrated by the female teacher example cited above. There, the directly computed SMR of .97 compares to the conversion SMR of $1.18 \times .93 = 1.10$ which is still much below the adjusted rate ratio of 1.32.

Another measure of risk, the Odds Ratio (OR), has sometimes been preferred to the PMR (17). However, like PMR, it is a "relative" measure, and in the female teacher example, the age-specific and adjusted ORs are almost identical to the PMRs.

Other (if less striking) examples of disparities among risk measures can be found in the data. Thus, it is our considered opinion that the preferred age-specific and directly adjusted rates are the best vehicles by which to analyze the data, though we previously expended considerable resources producing and analyzing PMRs and though population-based rates are not without their biases, particularly for intercensal years. At least in a rates analysis, we appear likely to produce fewer false-negative results though more false-positive ones than would PMR, and in our opinion, it is better to suggest elevated risk that may later be disproved than to cover up a risk and thereby prevent efforts to ameliorate a real problem.

AGE AT DEATH AND YEARS OF LIFE LOST

In addition to considerable previous work utilizing PMR, we also examined mean ages at death and mean years of life lost (YLL), the latter based on the difference between a decedent's age at death and the life expectancy of the decedent's race-sex group. Other mortality studies have likewise examined these and related indices.

As it turns out, however, mean age and mean YLL merely reflect the age distribution of the population, with "traditional" occupations (e.g., farmers and clergymen) having high mean ages and low mean YLLs while "modern" occupations (e.g., truckers and technologists/technicians) have low mean ages and high mean YLLs. The reason for this is that, compared to farmers and clergymen, most truckers and techs haven't been around long enough to get old, and their groups have gotten younger as baby boomers filled jobs created by exponential growth in trucking and technology. Therefore, any trucker and tech decedents will tend to be young relative to their farmer and clergymen counterparts. Comparing occupation-specific mean age at death and mean YLL to the corresponding median age of the 1980 census population ages 16 and older, near-perfect positive and negative correlations respectively can be demonstrated.

APPENDIX II-1

OCCUPATIONAL CLASSIFICATION WITH SELECTED COMPONENT CATEGORIES

(Codes are the Bureau of the Census equivalents to the Standard Occupational Classification)

OCCUPATION	CODES
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL	003-037
MANAGERS AND ADMINISTRATORS	003-019
MANAGEMENT RELATED OCCUPATIONS	023-037
PROFESSIONAL SPECIALTY OCCUPATIONS	043-199
ENGINEERS	044-059
ELECTRICAL AND ELECTRONIC ENGINEERS	055
TEACHERS, LIBRARIANS, AND COUNSELORS	113-165
RELIGIOUS WORKERS	176,177
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	203-235
ENGINEERING AND SCIENCE TECHNICIANS	213-225
SALES OCCUPATIONS	243-285
SUPERVISORS AND PROPRIETORS, SALES	243
SALES REPRESENTATIVES, FINANCE AND BUSINESS	253-257
SALES REPRESENTATIVES, COMMODITIES	258,259
SALES WORKERS, RETAIL AND PERSONAL SERVICES	263-278
ADMINISTRATIVE SUPPORT OCCUPATIONS	303-389
MAIL AND MESSAGE DISTRIBUTORS	354-357
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	364,365
PROTECTIVE SERVICE OCCUPATIONS	413-427
GUARDS	425-427
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	433-469
FOOD PREPARATION AND SERVICE OCCUPATIONS	433-444
COOKS	436,437
CLEANING AND BUILDING SERVICE OCCUPATIONS	448-455
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	503-699
MECHANICS AND REPAIRERS	503-549
AUTO MECHANICS, INCL. BODY	505,506,514
CONSTRUCTION TRADES	553-599
CARPENTERS	567,569
ELECTRICIANS	575,576
PAINTERS, CONSTRUCTION AND MAINTENANCE	579
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	585,587
PRECISION PRODUCTION OCCUPATIONS	633-699
SUPERVISORS, PRODUCTION WORKERS	633
MACHINISTS	637,639
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS AND INSPECTORS	703-799
TEXTILE, APPAREL, AND FURNISHINGS MACHINES	738-749
TEXTILE MACHINE OPERATORS	738-743,749
WELDERS AND CUTTERS	783
ASSEMBLERS	785
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	803-859
MOTOR VEHICLE OPERATORS	803-814
TRUCK DRIVERS AND DRIVER-SALES WORKERS	804-806
MATERIAL MOVING EQUIPMENT OPERATORS	843-859
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	863-889
CONSTRUCTION LABORERS	869
FREIGHT, STOCK, AND MATERIAL HANDLERS	875-883
LABORERS EXC. CONSTRUCTION	889

APPENDIX II-2

INDUSTRIAL CLASSIFICATION WITH SELECTED COMPONENT CATEGORIES

(Codes are the Bureau of the Census equivalents to the Standard Industrial Classification)

INDUSTRY	CODES
CONSTRUCTION	060
MANUFACTURING	100-392
FOOD INDUSTRIES	100-102,110-112,120-122
YARN, THREAD, AND FABRIC MILLS	142
OTHER TEXTILE MILL PRODUCTS	132,140,141,150
PAPER AND ALLIED PRODUCTS	160-162
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	171,172
CHEMICALS AND ALLIED PRODUCTS	180-192
LOGGING	230
SAWMILLS, PLANING MILLS, AND MILLWORK	231
FURNITURE AND FIXTURES	242
PRIMARY IRON AND STEEL INDUSTRIES	270,271
FABRICATED METAL INDUSTRIES	281-301
MACHINERY EXCEPT ELECTRICAL	310-322,331,332
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	340-342,350
TRANSPORTATION EQUIPMENT	351-352,360-362,370
TRANSPORTATION, COMMUNICATIONS, OTHER PUBLIC UTILITIES	400-472
TRUCKING SERVICE AND WAREHOUSING	410,411
U.S. POSTAL SERVICE	412
COMMUNICATIONS	440-442
ELECTRIC AND GAS UTILITIES	460-462
WATER SUPPLY, SANITARY SERVICES, AND OTHER UTILITIES	470-472
WHOLESALE TRADE	500-571
RETAIL TRADE	580-691
HARDWARE AND BUILDING MATERIAL	580,581
GENERAL MERCHANDISE STORES	591-600
FOOD, BAKERY, AND DAIRY STORES	601-611
AUTOMOTIVE DEALERS AND SUPPLY STORES	612,620,622
GASOLINE SERVICE STATIONS	621
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	632,640
EATING AND DRINKING PLACES	641
FINANCE, INSURANCE, AND REAL ESTATE	700-712
INSURANCE	711
BUSINESS AND REPAIR SERVICES	721-760
AUTOMOTIVE REPAIR AND SERVICES	750,751
PERSONAL SERVICES	761-791
LAUNDRY, CLEANING, AND GARMENT SERVICES	771
PROFESSIONAL AND RELATED SERVICES	812-892
HOSPITALS	831
OTHER HEALTH SERVICES	812-830,832,840
ELEMENTARY AND SECONDARY SCHOOLS	842
COLLEGES AND UNIVERSITIES	850
SOCIAL SERVICES, RELIGIOUS, AND MEMBERSHIP ORGANIZATIONS	861-871,880,881
PUBLIC ADMINISTRATION	900-932

APPENDIX II-3

CAUSE OF DEATH CLASSIFICATION WITH SELECTED COMPONENT CATEGORIES

(Codes are from the 9th Revision of the International Classification of Diseases)

UNDERLYING CAUSE OF DEATH	CODES
TOTAL DISEASES OF THE HEART	390-398,402,404-429
ACUTE MYOCARDIAL INFARCTION	410
OTHER FORMS OF ISCHEMIC HEART DISEASE	411-414
OTHER DISEASES OF HEART	390-398,402,404-409,415-429
CEREBROVASCULAR DISEASE	430-438
ALL CANCER	140-208
CANCER OF ESOPHAGUS	150
CANCER OF COLON, RECTUM AND ANUS	153,154
CANCER OF PANCREAS	157
CANCER OF TRACHEA, BRONCHUS, AND LUNG	162
CANCER OF PROSTATE	185
DIABETES MELLITUS	250
PNEUMONIA AND INFLUENZA	480-487
CHRONIC OBSTRUCTIVE PULMONARY DISEASE	490-496
CHRONIC LIVER DISEASE AND CIRRHOSIS	571
MOTOR VEHICLE ACCIDENTS	810-825
ALL OTHER ACCIDENTS AND ADVERSE EFFECTS	800-807,826-949
SUICIDE	950-959
HOMICIDE	960-978

APPENDIX III

Formulas for the Determination of Significance Levels

Age-Specific Rates

For a given occupation and cause group, let

r_{i1} = the proportion in age group i who die, for that occupation

where $r_{i1} = \frac{d_{i1}}{n_{i1}}$ or deaths divided by population, and

r_{i2} = the proportion in age group i who die, for all **other** occupations

where $r_{i2} = \frac{d_{i2}}{n_{i2}}$.

Then the ratio of the age-specific rates (or proportions) is

$$\hat{\Theta}_i = \frac{r_{i1}}{r_{i2}}.$$

To assist large sample normality of this estimator, we take natural logarithms:

$$\ln \hat{\Theta}_i = \ln r_{i1} - \ln r_{i2}$$

which has a variance

$$V(\ln \hat{\Theta}_i) = V(\ln r_{i1}) + V(\ln r_{i2}).$$

This variance may be estimated using a linearized Taylor series approach so that

$$V(\ln \hat{\Theta}_i) \doteq \left(\frac{1}{r_{i1}}\right)^2 V(r_{i1}) + \left(\frac{1}{r_{i2}}\right)^2 V(r_{i2})$$

$$\text{where } V(r_{i1}) = \frac{r_{i1}}{n_{i1}}$$

$$\text{and } V(r_{i2}) = \frac{r_{i2}}{n_{i2}},$$

following the Poisson distribution.

A Z-score for significance of the ratio is computed:

$$Z = \frac{\ln r_{i1} - \ln r_{i2}}{\sqrt{V(\ln \hat{\Theta}_i)}}$$

$$\text{where } \ln \hat{\Theta}_i - \ln 1 = \ln \hat{\Theta}_i - 0 = \ln r_{i1} - \ln r_{i2}$$

with $V(\ln \hat{\Theta}_i)$ calculated as above.

If the absolute value of this Z-score is greater than 2.57, then the rate ratio is considered significantly higher or lower than one at $p < .01$ and is flagged with one asterisk; if the absolute value of the Z-score is greater than 3.3, then the ratio is considered significantly different from one at $p < .001$ and is flagged with two asterisks.

Age-Adjusted Rates

For a given occupation and cause group, let

r_1^* = the age-adjusted death rate for that occupation

where $r_1^* = \sum_{i=1}^4 w_i r_{i1}$, assuming 4 age groups and where w_i is a weight = to the proportion of a **standard** population in age group i

and r_2^* = the age-adjusted death rate for all **other** occupations

where $r_2^* = \sum_{i=1}^4 w_i r_{i2}$.

For the standard population we used the total 1984-86 male population age 40-69 employed in civilian nonagricultural occupations, i.e., all occupation groups combined.

The ratio of the age-adjusted rates is

$$\hat{\Theta}^* = \frac{r_1^*}{r_2^*}.$$

Following the approach above, the variance of the natural logarithm of this ratio is:

$$V(\ln \hat{\Theta}^*) = \left(\frac{1}{r_1^*} \right)^2 V(r_1^*) + \left(\frac{1}{r_2^*} \right)^2 V(r_2^*)$$

$$\text{where } V(r_1^*) = \sum_{i=1}^4 (w_i)^2 V(r_{i1})$$

$$\text{and } V(r_2^*) = \sum_{i=1}^4 (w_i)^2 V(r_{i2}).$$

A Z-score for significance of this ratio is computed as:

$$Z = \frac{\ln r_1^* - \ln r_2^*}{\sqrt{V(\ln \hat{\Theta}^*)}}$$

with absolute Z values greater than 2.57 and 3.3 resulting in flagging the rate ratios as described above.

APPENDIX IV

TABLES FOR OCCUPATION GROUPS

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ALL DEATHS

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49	RATES OF 50-59	LEVEL OF 60-64	SIGNIFICANCE- 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	2695	0.45**	0.45**	0.48**	0.54**	0.48**
MANAGERS AND ADMINISTRATORS	2239	0.45**	0.45**	0.49**	0.55**	0.49**
MANAGEMENT RELATED OCCUPATIONS	456	0.44**	0.52**	0.49**	0.56**	0.51**
PROFESSIONAL SPECIALTY OCCUPATIONS	1784	0.47**	0.51**	0.65**	0.60**	0.57**
ENGINEERS	440	0.57**	0.63**	0.94	1.13	0.86**
ELECTRICAL AND ELECTRONIC ENGINEERS	141	0.86	0.78	1.27	1.61*	1.17
TEACHERS, LIBRARIANS, AND COUNSELORS	396	0.37**	0.49**	0.59**	0.46**	0.49**
RELIGIOUS WORKERS	254	0.35**	0.66**	0.72*	0.57**	0.61**
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	338	0.48**	0.58**	0.67**	0.60**	0.60**
ENGINEERING AND SCIENCE TECHNICIANS	143	0.41**	0.46**	0.55**	0.54**	0.50**
SALES OCCUPATIONS	2941	0.70**	0.77**	0.79**	0.78**	0.77**
SUPERVISORS AND PROPRIETORS, SALES	1296	1.43**	1.32**	1.32**	1.39**	1.36**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	411	0.36**	0.56**	0.58**	0.50**	0.52**
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	340	0.31**	0.37**	0.40**	0.42**	0.38**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	887	0.86	0.83*	0.86	0.74**	0.81**
ADMINISTRATIVE SUPPORT OCCUPATIONS	1099	0.44**	0.42**	0.49**	0.45**	0.45**
MAIL AND MESSAGE DISTRIBUTORS	245	0.34**	0.54**	0.63**	0.65**	0.57**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	315	0.73	0.62**	0.66**	0.48**	0.60**
PROTECTIVE SERVICE OCCUPATIONS	669	0.80	0.97	0.98	0.62**	0.84**
GUARDS	353	1.48	1.12	0.86	0.47**	0.90
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	2127	1.64**	1.12*	0.89*	0.75**	1.01
FOOD PREPARATION AND SERVICE OCCUPATIONS	340	1.97**	1.33*	0.87	1.21	1.26**
COOKS	258	2.86**	1.84**	0.93	1.58**	1.66**
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	1527	1.85**	1.14	0.93	0.73**	1.05
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	7834	0.83**	0.86**	0.85**	0.86**	0.86**
MECHANICS AND REPAIRERS	2104	0.69**	0.75**	0.74**	0.73**	0.73**
AUTO MECHANICS, INCL. BODY	777	1.29*	1.32**	1.45**	0.94	1.23**
CONSTRUCTION TRADES	3663	1.36**	1.25**	1.21**	1.19**	1.23**
CARPENTERS	1215	1.65**	1.35**	1.29**	1.25**	1.34**
ELECTRICIANS	313	1.00	0.86	0.88	1.18	0.99
PAINTERS, CONSTRUCTION AND MAINTENANCE	514	2.30**	1.67**	1.47**	1.24	1.57**
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	348	1.32	1.34*	1.21	1.61**	1.39**
PRECISION PRODUCTION OCCUPATIONS	1990	0.58**	0.66**	0.63**	0.73**	0.66**
SUPERVISORS, PRODUCTION WORKERS	821	0.39**	0.39**	0.43**	0.54**	0.45**
MACHINISTS	422	1.43	2.03**	1.79**	1.89**	1.84**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	3467	0.75**	0.82**	0.76**	0.76**	0.78**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	1147	1.20	1.49**	1.19*	1.09	1.25**
TEXTILE MACHINE OPERATORS	945	1.13	1.39**	1.16	1.08	1.20**
WELDERS AND CUTTERS	231	0.90	0.87	1.28	1.24	1.09
ASSEMBLERS	197	0.75	0.48**	0.66*	0.47**	0.56**
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	2824	1.01	1.10*	0.96	1.08	1.04
MOTOR VEHICLE OPERATORS	2155	1.03	1.13*	1.04	1.11	1.09**
TRUCK DRIVERS AND DRIVER-SALES WORKERS	1914	0.99	1.09	1.05	1.07	1.06
MATERIAL MOVING EQUIPMENT OPERATORS	518	1.01	0.99	0.67**	0.79*	0.85**
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	3251	2.54**	1.79**	1.62**	1.36**	1.71**
CONSTRUCTION LABORERS	829	3.44**	2.02**	2.01**	1.64**	2.09**
FREIGHT, STOCK, AND MATERIAL HANDLERS	472	1.14	1.15	0.87	0.65**	0.92
LABORERS EXC. CONSTRUCTION	1724	4.47**	3.04**	2.76**	2.43**	2.97**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

TOTAL DISEASES OF THE HEART

OCCUPATION	TOTAL DEATHS	-RATIO 40-49	OF 50-59	RATES & LEVEL OF 60-64	SIGNIFICANCE- 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	1095	0.49**	0.49**	0.51**	0.54**	0.51**
MANAGERS AND ADMINISTRATORS	934	0.52**	0.50**	0.55**	0.53**	0.53**
MANAGEMENT RELATED OCCUPATIONS	161	0.46**	0.49**	0.40**	0.52**	0.47**
PROFESSIONAL SPECIALTY OCCUPATIONS	743	0.40**	0.58**	0.66**	0.70**	0.62**
ENGINEERS	186	0.55	0.72	0.95	1.31	0.96
ELECTRICAL AND ELECTRONIC ENGINEERS	62		1.10	1.24	2.06**	1.38
TEACHERS, LIBRARIANS, AND COUNSELORS	153	0.26**	0.55**	0.57**	0.45**	0.49**
RELIGIOUS WORKERS	126		0.86	0.99	0.69	0.77*
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	134	0.42**	0.67*	0.67	0.61*	0.62**
ENGINEERING AND SCIENCE TECHNICIANS	57		0.60	0.48*	0.59	0.53**
SALES OCCUPATIONS	1215	0.91	0.81**	0.80**	0.83**	0.83**
SUPERVISORS AND PROPRIETORS, SALES	523	1.88**	1.30**	1.32**	1.45**	1.41**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	149	0.39*	0.54**	0.52**	0.44**	0.49**
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	153	0.41**	0.43**	0.47**	0.46**	0.45**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	386	1.11	0.97	0.88	0.83	0.91
ADMINISTRATIVE SUPPORT OCCUPATIONS	440	0.52**	0.42**	0.51**	0.45**	0.46**
MAIL AND MESSAGE DISTRIBUTORS	106		0.54*	0.77	0.67	0.64**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	126	0.79	0.68	0.66	0.48**	0.62**
PROTECTIVE SERVICE OCCUPATIONS	312	1.22	1.16	1.17	0.71**	1.02
GUARDS	164	2.04*	1.25	1.14	0.52**	1.06
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	782	1.59**	1.04	0.86	0.70**	1.04
FOOD PREPARATION AND SERVICE OCCUPATIONS	116	2.49**	1.13	0.65	1.04	1.11
COOKS	77	3.03**	1.48	0.55	1.21	1.30
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	573	1.57*	1.10	0.98	0.67**	0.98
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	2952	0.82*	0.85**	0.81**	0.85**	0.84**
MECHANICS AND REPAIRERS	821	0.74*	0.74**	0.75**	0.74**	0.74**
AUTO MECHANICS, INCL. BODY	289	1.28	1.30	1.48**	0.83	1.19*
CONSTRUCTION TRADES	1340	1.26*	1.24**	1.09	1.12	1.16**
CARPENTERS	440	1.41	1.39**	1.15	1.13	1.24**
ELECTRICIANS	133	1.06	0.90	1.03	1.35	1.10
PAINTERS, CONSTRUCTION AND MAINTENANCE	161	1.90*	1.44	1.14	0.98	1.26*
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	131	0.87	1.34	1.14	1.76**	1.37**
PRECISION PRODUCTION OCCUPATIONS	331	0.57**	0.67**	0.64**	0.71**	0.66**
SUPERVISORS, PRODUCTION WORKERS	764	0.37**	0.42**	0.48**	0.53**	0.47**
MACHINISTS	147	1.06	1.88**	1.70**	1.64**	1.66**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	1374	0.76*	0.81**	0.82**	0.78**	0.80**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	469	1.37	1.41**	1.32*	1.15	1.30**
TEXTILE MACHINE OPERATORS	394	1.35	1.35*	1.31*	1.16	1.28**
WELDERS AND CUTTERS	91	0.68	1.02	1.59	1.07	1.15
ASSEMBLERS	78	0.69	0.49*	0.77	0.47**	0.58**
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	1105	0.98	1.16*	0.96	1.09	1.06
MOTOR VEHICLE OPERATORS	849	0.99	1.21*	1.03	1.14	1.12*
TRUCK DRIVERS AND DRIVER-SALES WORKERS	751	1.00	1.16	1.05	1.08	1.09
MATERIAL MOVING EQUIPMENT OPERATORS	206	1.07	0.98	0.77	0.79	0.87
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	1151	2.18**	1.57**	1.54**	1.30**	1.54**
CONSTRUCTION LABORERS	277	2.65**	1.69**	1.69**	1.71**	1.80**
FREIGHT, STOCK, AND MATERIAL HANDLERS	180	1.09	1.14	0.86	0.67*	0.91
LABORERS EXC. CONSTRUCTION	611	4.06**	2.62**	2.76**	2.20**	2.67**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ACUTE MYOCARDIAL INFARCTION

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49	RATES & LEVEL OF 50-59	SIGNIFICANCE- 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	540	0.51**	0.53**	0.54**	0.52**
MANAGERS AND ADMINISTRATORS	471	0.51**	0.56**	0.59**	0.55**
MANAGEMENT RELATED OCCUPATIONS	69	0.56	0.42**	0.35**	0.41**
PROFESSIONAL SPECIALTY OCCUPATIONS	355	0.34**	0.56**	0.68**	0.61**
ENGINEERS	87		0.72	1.17	0.91
ELECTRICAL AND ELECTRONIC ENGINEERS	31		1.21	2.06	1.40
TEACHERS, LIBRARIANS, AND COUNSELORS	68		0.43**	0.47**	0.45**
RELIGIOUS WORKERS	71		1.11	0.64	0.91
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	70	0.50	0.58	0.62	0.67*
ENGINEERING AND SCIENCE TECHNICIANS	33		0.78		0.62*
SALES OCCUPATIONS	616	1.07	0.89	0.88	0.87**
SUPERVISORS AND PROPRIETORS, SALES	273	2.23**	1.38**	1.58**	1.53**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	72		0.45**	0.47**	0.48**
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	68		0.45**	0.42**	0.41**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	200	1.32	1.22	0.88	0.99
ADMINISTRATIVE SUPPORT OCCUPATIONS	215	0.39**	0.43**	0.44**	0.46**
ADMINISTRATIVE SUPPORT OCCUPATIONS	49		0.60	0.62	0.59**
MAIL AND MESSAGE DISTRIBUTORS	57		0.70	0.50*	0.57**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	158	1.22	1.40	0.68	1.07
PROTECTIVE SERVICE OCCUPATIONS	80		1.42	0.54*	1.04
GUARDS	370	1.30	1.04	0.70**	0.90
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	53		1.13	1.21	1.04
FOOD PREPARATION AND SERVICE OCCUPATIONS	36		1.61	1.57	1.27
COOKS	268	1.42	1.13	0.61**	0.95
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	1457	0.86	0.84**	0.88	0.85**
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	415	0.80	0.72**	0.80	0.77**
MECHANICS AND REPAIRERS	144	1.39	1.19	0.87	1.22
AUTO MECHANICS, INCL. BODY	621	1.18	1.17	1.07	1.10
CONSTRUCTION TRADES	213	1.48	1.26	1.11	1.24*
CARPENTERS	73		1.06	1.81*	1.26
ELECTRICIANS	74	2.19*	1.23	0.86	1.19
PAINTERS, CONSTRUCTION AND MAINTENANCE	54		1.45	1.50	1.17
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	408	0.68	0.70**	0.78**	0.73**
PRECISION PRODUCTION OCCUPATIONS	195	0.47**	0.56**	0.64**	0.56**
SUPERVISORS, PRODUCTION WORKERS	71		1.68	1.48	1.65**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	730	0.83	0.91	0.79*	0.88*
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	244	1.16	1.57**	1.20	1.39**
TEXTILE MACHINE OPERATORS	207	1.10	1.56**	1.17	1.38**
TEXTILE CUTTERS	48		1.13	1.12	1.26
WELDERS AND CUTTERS	44		0.68	0.55	0.67*
ASSEMBLERS	530	1.07	1.05	1.13	1.05
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	410	1.12	1.15	1.15	1.10
MOTOR VEHICLE OPERATORS	364	1.15	1.12	1.07	1.08
TRUCK DRIVERS AND DRIVER-SALES WORKERS	101	1.11	0.84	0.98	0.88
MATERIAL MOVING EQUIPMENT OPERATORS	476	1.72**	1.26*	1.16	1.28**
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	106	2.02*	1.13	1.52	1.41**
CONSTRUCTION LABORERS	72		0.94	0.61	0.74
FREIGHT, STOCK, AND MATERIAL HANDLERS	260	3.65**	2.23**	1.87**	2.33**
LABORERS EXC. CONSTRUCTION					

1984 - 1986

OTHER FORMS OF ISCHEMIC HEART DISEASE

OCCUPATION	TOTAL DEATHS	-RATIO OF	RATES & LEVEL OF	SIGNIFICANCE-	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS		40-49	50-59	60-64	65-69
MANAGERS AND ADMINISTRATORS	343	0.52**	0.58**	0.66**	0.57**
MANAGEMENT RELATED OCCUPATIONS	286	0.57*	0.57**	0.68**	0.60**
PROFESSIONAL SPECIALTY OCCUPATIONS	57		0.70	0.60	0.61**
ENGINEERS	218	0.48*	0.63**	0.66*	0.67**
ELECTRICAL AND ELECTRONIC ENGINEERS	62		1.03	0.83	1.18
TEACHERS, LIBRARIANS, AND COUNSELORS	20		0.69	0.49	1.59
RELIGIOUS WORKERS	25				0.46**
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	39		0.95		0.55*
ENGINEERING AND SCIENCE TECHNICIANS	13				0.66*
SALES OCCUPATIONS	360	1.02	0.87	0.91	0.88
SUPERVISORS AND PROPRIETORS, SALES	148	1.97	1.30	1.30	1.58**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	50		0.90	0.58	0.45*
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	47		0.48*	0.55	0.47*
SALES WORKERS, RETAIL AND PERSONAL SERVICES	114	1.37	0.84	1.15	0.86
ADMINISTRATIVE SUPPORT OCCUPATIONS	129	0.98	0.33**	0.45**	0.57**
MAIL AND MESSAGE DISTRIBUTORS	24				0.50**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	44	2.52*	0.66	0.60	0.56*
PROTECTIVE SERVICE OCCUPATIONS	91		1.10	1.43	0.82
GUARDS	51		1.40	1.33	1.09
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	213	1.67	1.03	0.86	1.19
FOOD PREPARATION AND SERVICE OCCUPATIONS	31				0.92
COOKS	19				1.07
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	162	2.12*	1.03	0.96	1.09
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	793	0.73	0.87	0.79*	1.00
MECHANICS AND REPAIRERS	226	0.81	0.77	0.77	0.82**
AUTO MECHANICS, INCL. BODY	81	1.58	1.56	1.27	0.75**
CONSTRUCTION TRADES	378	1.24	1.31*	1.02	1.22
CARPENTERS	118		1.44	0.92	1.25
ELECTRICIANS	37		0.95	1.42	1.26
PAINTERS, CONSTRUCTION AND MAINTENANCE	43		1.90*		1.19
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	44			1.61	1.24
PRECISION PRODUCTION OCCUPATIONS	182		0.64**	0.61**	0.98
SUPERVISORS, PRODUCTION WORKERS	67		0.22**	0.48**	2.26**
MACHINISTS	43		2.43**	1.64	1.67**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	337				0.57**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	123	0.76	0.68**	0.65**	0.35**
TEXTILE MACHINE OPERATORS	102	1.90	1.23	1.12	0.41**
WELDERS AND CUTTERS	19		1.13	1.08	1.87
ASSEMBLERS	20				1.80**
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	290	0.93	1.27	0.91	0.70**
MOTOR VEHICLE OPERATORS	223	0.93	1.28	1.03	1.24
TRUCK DRIVERS AND DRIVER-SALES WORKERS	202	0.95	1.21	1.07	1.19
MATERIAL MOVING EQUIPMENT OPERATORS	53		1.22	0.65	0.86
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	287	2.13**	1.30	1.46**	0.55*
CONSTRUCTION LABORERS	83		1.77*	2.08**	1.01
FREIGHT, STOCK, AND MATERIAL HANDLERS	48		0.82	0.84	0.97
LABORERS EXC. CONSTRUCTION	138	3.84**	2.07**	2.28**	0.99
					0.57
					1.19
					2.03**
					1.98**
					0.87
					2.18**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

OTHER DISEASE OF HEART

OCCUPATION	TOTAL DEATHS	-RATIO OF	RATES & LEVEL OF	SIGNIFICANCE-	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	212	40-49	50-59	65-69	0.41**
MANAGERS AND ADMINISTRATORS	177	0.45**	0.31**	0.50**	0.41**
MANAGEMENT RELATED OCCUPATIONS	35	0.48**	0.30**	0.47**	0.42**
PROFESSIONAL SPECIALTY OCCUPATIONS	170	0.45**	0.39*	0.71	0.44**
ENGINEERS	37		0.58**	0.67*	0.59**
ELECTRICAL AND ELECTRONIC ENGINEERS	11		1.02	1.17	0.80
TEACHERS, LIBRARIANS, AND COUNSELORS	45		0.66	0.52	1.11
RELIGIOUS WORKERS	30		1.13	0.74	0.61*
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	25		0.56		0.75
ENGINEERING AND SCIENCE TECHNICIANS	11				0.48**
SALES OCCUPATIONS	239	0.54*	0.59**	0.67**	0.44**
SUPERVISORS AND PROPRIETORS, SALES	102	1.17	1.14	1.05	0.66**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	27		0.80		1.14
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	38		1.26		0.37**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	72		0.59	0.53	0.47**
ADMINISTRATIVE SUPPORT OCCUPATIONS	96		0.60	0.69	0.69**
MAIL AND MESSAGE DISTRIBUTORS	33		0.48**	0.33**	0.42**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	25				0.81
PROTECTIVE SERVICE OCCUPATIONS	63		0.72	0.73	0.51**
GUARDS	33			0.42*	0.84
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	199	2.07**	1.07	0.72	0.95
FOOD PREPARATION AND SERVICE OCCUPATIONS	32	4.63**	0.91		1.03
COOKS	22				1.32
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	143	1.41	1.13	0.74	1.62
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	702	0.82	0.87	0.81*	1.01
MECHANICS AND REPAIRERS	180	0.59	0.75	0.66*	0.83**
AUTO MECHANICS, INCL. BODY	64		1.26	0.78	0.68**
CONSTRUCTION TRADES	341	1.43	1.31*	1.06	1.11
CARPENTERS	109	1.60	1.62*	1.03	1.24**
ELECTRICIANS	23				1.31*
PAINTERS, CONSTRUCTION AND MAINTENANCE	44		1.37	1.19	0.78
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	33			1.41	1.41
PRECISION PRODUCTION OCCUPATIONS	174	0.60	0.62**	1.65	1.43
SUPERVISORS, PRODUCTION WORKERS	69		0.36**	0.74	0.63**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	33		1.70	0.46**	0.40**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	307	0.63	0.76	1.69	1.55
TEXTILE MACHINE OPERATORS	102	1.32	1.29	0.76*	0.74**
WELDERS AND CUTTERS	85	1.56	1.15	1.05	1.18
ASSEMBLERS	24			1.08	1.16
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	14				1.26
MOTOR VEHICLE OPERATORS	285	0.86	1.26	1.24	0.43*
TRUCK DRIVERS AND DRIVER-SALES WORKERS	216	0.82	1.28	1.35	1.16
MATERIAL MOVING EQUIPMENT OPERATORS	185	0.75	1.19	1.23	1.20*
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	52		1.01	0.69	1.13
CONSTRUCTION LABORERS	388	3.07**	2.59**	0.91	0.91
FREIGHT, STOCK, AND MATERIAL HANDLERS	88	4.24**	1.91*	1.74	2.26**
LABORERS EXC. CONSTRUCTION	60	1.68	1.94*	0.61	2.39**
	213	5.03**	4.01**	3.42**	1.28
					3.96**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CEREBROVASCULAR DISEASE

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49 0.35**	RATES OF 50-59 0.34** 0.35** 0.50*	LEVEL OF 60-64 0.37** 0.33** 0.43**	SIGNIFICANCE- 65-69 0.39** 0.39** 0.48**	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	98					0.36**
MANAGERS AND ADMINISTRATORS	77					0.35**
MANAGEMENT RELATED OCCUPATIONS	21					0.50*
PROFESSIONAL SPECIALTY OCCUPATIONS	64	0.45	0.34**	0.43**	0.48**	0.42**
ENGINEERS	18					0.76
ELECTRICAL AND ELECTRONIC ENGINEERS	5					0.73
TEACHERS, LIBRARIANS, AND COUNSELORS	17					0.46*
RELIGIOUS WORKERS	8					0.41
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	12					0.48
ENGINEERING AND SCIENCE TECHNICIANS	4					0.33
SALES OCCUPATIONS	130	0.55	0.44**	0.78	0.90	0.70**
SUPERVISORS AND PROPRIETORS, SALES	62		1.00	1.74	1.32	1.35
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	11					0.28**
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	14					0.34**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	43					0.77
ADMINISTRATIVE SUPPORT OCCUPATIONS	56	0.91	0.46*	0.71	1.12	0.49**
MAIL AND MESSAGE DISTRIBUTORS	11			0.48*	0.37**	0.54
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	14					0.58
PROTECTIVE SERVICE OCCUPATIONS	34			1.60	0.62	0.89
GUARDS	14					0.69
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	116	2.51**	1.12	1.21	0.74	1.17
FOOD PREPARATION AND SERVICE OCCUPATIONS	21					1.57
COOKS	17					2.18*
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	78	3.04**	1.31	0.98	0.62	1.18
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	371	0.95	0.88	0.89	0.78	0.86**
MECHANICS AND REPAIRERS	80		0.54*	0.73	0.58*	0.59**
AUTO MECHANICS, INCL. BODY	35			1.99	0.83	1.18
CONSTRUCTION TRADES	178	1.95**	1.15	1.41	1.01	1.26*
CARPENTERS	65		1.63	1.49	1.23	1.52*
ELECTRICIANS	14					0.90
PAINTERS, CONSTRUCTION AND MAINTENANCE	19					1.22
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	20					1.69
PRECISION PRODUCTION OCCUPATIONS	110	0.69	1.03	0.53*	0.81	0.78
SUPERVISORS, PRODUCTION WORKERS	34		0.38*		0.49	0.39**
MACHINISTS	27		4.03**		2.81**	2.49**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	158	0.64	0.72	0.62*	0.86	0.73**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	55		1.26	0.94	1.34	1.21
TEXTILE MACHINE OPERATORS	44		1.35	0.92	1.28	1.12
WELDERS AND CUTTERS	7					0.71
ASSEMBLERS	7					0.43
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	130	0.74	1.29	0.83	1.06	1.02
MOTOR VEHICLE OPERATORS	94		1.26	0.98	1.07	1.01
TRUCK DRIVERS AND DRIVER-SALES WORKERS	84		1.32	0.95	1.01	1.00
MATERIAL MOVING EQUIPMENT OPERATORS	28		1.40			0.97
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	181	1.90*	2.60**	1.96**	1.64**	2.00**
CONSTRUCTION LABORERS	39		2.79**	2.28*		2.04**
FREIGHT, STOCK, AND MATERIAL HANDLERS	24					0.93
LABORERS EXC. CONSTRUCTION	105	3.66**	4.37**	3.67**	3.33**	3.74**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ALL CANCER

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49	50-59	60-64	65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	836	0.68**	0.55**	0.49**	0.63**	0.57**
MANAGERS AND ADMINISTRATORS	701	0.73*	0.55**	0.49**	0.65**	0.58**
MANAGEMENT RELATED OCCUPATIONS	135	0.51	0.61**	0.56**	0.57**	0.57**
PROFESSIONAL SPECIALTY OCCUPATIONS	490	0.56**	0.51**	0.70**	0.58**	0.59**
ENGINEERS	138	0.63	0.86	1.12	1.13	1.00
ELECTRICAL AND ELECTRONIC ENGINEERS	38		1.02	1.04		1.14
TEACHERS, LIBRARIANS, AND COUNSELORS	109	0.39*	0.47**	0.63*	0.49**	0.51**
RELIGIOUS WORKERS	63		0.58	0.54	0.54*	0.56**
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	105	0.67	0.74	0.81	0.55*	0.69**
ENGINEERING AND SCIENCE TECHNICIANS	50		0.56	0.82	0.57	0.66*
SALES OCCUPATIONS	852	0.70*	0.91	0.87	0.77**	0.84**
SUPERVISORS AND PROPRIETORS, SALES	378	1.71*	1.53**	1.40**	1.42**	1.47**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	140		0.70	0.80	0.60*	0.66**
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	95		0.49**	0.40**	0.37**	0.40**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	239	0.70	0.90	0.90	0.68**	0.81*
ADMINISTRATIVE SUPPORT OCCUPATIONS	320	0.52**	0.45**	0.54**	0.46**	0.49**
MAIL AND MESSAGE DISTRIBUTORS	71		0.67	0.64	0.55*	0.62**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	87	0.95	0.53*	0.73	0.51**	0.62**
PROTECTIVE SERVICE OCCUPATIONS	159	0.72	0.92	0.84	0.51**	0.75**
GUARDS	77		1.01	0.66	0.39**	0.66**
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	551	1.26	1.05	0.84	0.79*	0.93
FOOD PREPARATION AND SERVICE OCCUPATIONS	82	1.72	1.31	0.73	1.12	1.12
COOKS	66		1.92*	0.99	1.50	1.54**
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	398	1.38	1.04	0.86	0.80*	0.94
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	2185	0.80*	0.88*	0.88*	1.02	0.91**
MECHANICS AND REPAIRERS	599	0.63*	0.82*	0.76**	0.84	0.79**
AUTO MECHANICS, INCL. BODY	204	1.15	1.25	1.31	1.09	1.21*
CONSTRUCTION TRADES	971	1.21	1.16	1.20*	1.30**	1.22**
CARPENTERS	319	1.45	1.00	1.34*	1.42**	1.28**
ELECTRICIANS	73		0.90	0.72	1.00	0.87
PAINTERS, CONSTRUCTION AND MAINTENANCE	142	3.51**	1.64*	1.34	1.30	1.62**
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	88	1.46	1.65**	1.03	1.20	1.31
PRECISION PRODUCTION OCCUPATIONS	590	0.69*	0.70**	0.71**	0.83	0.74**
SUPERVISORS, PRODUCTION WORKERS	266	0.57*	0.46**	0.51**	0.66**	0.55**
MACHINISTS	128	1.77	2.12**	2.16**	2.11**	2.10**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	962	0.82	0.91	0.77**	0.75**	0.81**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	307	1.32	1.78**	1.12	0.90	1.21**
TEXTILE MACHINE OPERATORS	253	1.19	1.66**	1.10	0.91	1.21**
WELDERS AND CUTTERS	69	1.36	0.81	1.17	1.70*	1.25
ASSEMBLERS	52		0.59	0.55	0.48*	0.56**
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	743	1.18	0.97	1.00	1.09	1.03
MOTOR VEHICLE OPERATORS	552	1.19	0.95	1.04	1.12	1.05
TRUCK DRIVERS AND DRIVER-SALES WORKERS	493	1.16	0.95	1.04	1.08	0.89
MATERIAL MOVING EQUIPMENT OPERATORS	146	1.10	0.98	0.78	0.86	0.89
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	1793	2.17**	1.69**	1.50**	1.23*	1.53**
CONSTRUCTION LABORERS	206	1.66	2.16**	2.03**	1.69**	1.92**
FREIGHT, STOCK, AND MATERIAL HANDLERS	122	1.45	1.11	0.88	0.53*	0.89
LABORERS EXC. CONSTRUCTION	417	4.53**	2.70**	2.44**	2.21**	2.63**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF ESOPHAGUS

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69	ADJUSTED
OCCUPATION			
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	17		0.32**
MANAGERS AND ADMINISTRATORS	15		0.35**
MANAGEMENT RELATED OCCUPATIONS	2		0.24
PROFESSIONAL SPECIALTY OCCUPATIONS	8		0.26**
ENGINEERS	1		0.18
TEACHERS, LIBRARIANS, AND COUNSELORS	1		0.15
RELIGIOUS WORKERS	1		0.29
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	2		0.52
ENGINEERING AND SCIENCE TECHNICIANS	14		0.52
SALES OCCUPATIONS	2		0.38**
SUPERVISORS AND PROPRIETORS, SALES	2		0.22
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	3		0.41
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	4		0.47
SALES WORKERS, RETAIL AND PERSONAL SERVICES	5		0.50
ADMINISTRATIVE SUPPORT OCCUPATIONS	10		0.43*
MAIL AND MESSAGE DISTRIBUTORS	2		0.45
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	3		0.63
PROTECTIVE SERVICE OCCUPATIONS	6		0.79
GUARDS	5		1.31
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	23		1.09
FOOD PREPARATION AND SERVICE OCCUPATIONS	4		1.60
COOKS	4		2.90
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	16		1.06
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	86	1.05	1.11
MECHANICS AND REPAIRERS	24		0.91
AUTO MECHANICS, INCL. BODY	9	1.71	1.47
CONSTRUCTION TRADES	42		1.55*
CARPENTERS	13		1.44
ELECTRICIANS	3		0.96
PAINTERS, CONSTRUCTION AND MAINTENANCE	2		0.58
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	4		1.85
PRECISION PRODUCTION OCCUPATIONS	20		0.71
SUPERVISORS, PRODUCTION WORKERS	8		0.47
MACHINISTS	7		3.34*
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	26	0.88	0.62
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	13		1.62
TEXTILE MACHINE OPERATORS	11		1.56
WELDERS AND CUTTERS	3		1.77
ASSEMBLERS	1		0.28
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	17		0.63
MOTOR VEHICLE OPERATORS	9		0.44
TRUCK DRIVERS AND DRIVER-SALES WORKERS	9		0.49
MATERIAL MOVING EQUIPMENT OPERATORS	7		1.20
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	59	3.74**	3.62**
CONSTRUCTION LABORERS	14	3.88**	3.75**
FREIGHT, STOCK, AND MATERIAL HANDLERS	8		1.65
LABORERS EXC. CONSTRUCTION	33	7.34**	6.37**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF COLON, RECTUM AND ANUS

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	99	40-49	65-69
MANAGERS AND ADMINISTRATORS	82	0.94	1.15
MANAGEMENT RELATED OCCUPATIONS	17	0.96	1.15
PROFESSIONAL SPECIALTY OCCUPATIONS	59		
ENGINEERS	14	1.37	0.75
ELECTRICAL AND ELECTRONIC ENGINEERS	4		
TEACHERS, LIBRARIANS, AND COUNSELORS	12		
RELIGIOUS WORKERS	15		
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	17		
ENGINEERING AND SCIENCE TECHNICIANS	7		
SALES OCCUPATIONS	83	1.05	1.00
SUPERVISORS AND PROPRIETORS, SALES	33		1.04
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	23		1.92
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	10		
SALES WORKERS, RETAIL AND PERSONAL SERVICES	17		
ADMINISTRATIVE SUPPORT OCCUPATIONS	27	0.70	
MAIL AND MESSAGE DISTRIBUTORS	5		
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	6		
PROTECTIVE SERVICE OCCUPATIONS	15		
GUARDS	5		
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	38	0.92	
FOOD PREPARATION AND SERVICE OCCUPATIONS	6		
COOKS	3		
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	30		
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	153	0.48	0.93
MECHANICS AND REPAIRERS	33	0.64	0.96
AUTO MECHANICS, INCL. BODY	12		0.98
CONSTRUCTION TRADES	60	0.86	1.03
CARPENTERS	19		
ELECTRICIANS	3		
PAINTERS, CONSTRUCTION AND MAINTENANCE	5		
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	5		
PRECISION PRODUCTION OCCUPATIONS	59	0.73	0.83
SUPERVISORS, PRODUCTION WORKERS	30		0.96
MACHINISTS	11		2.34*
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	68	0.72	0.70
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	16		0.88
TEXTILE MACHINE OPERATORS	15		0.95
WELDERS AND CUTTERS	2		0.48
ASSEMBLERS	4		0.55
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	41	0.87	0.93
MOTOR VEHICLE OPERATORS	29	0.95	0.92
TRUCK DRIVERS AND DRIVER-SALES WORKERS	23	0.78	
MATERIAL MOVING EQUIPMENT OPERATORS	6		
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	44	0.84	0.81
CONSTRUCTION LABORERS	12		
FREIGHT, STOCK, AND MATERIAL HANDLERS	11		
LABORERS EXC. CONSTRUCTION	20		

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF PANCREAS

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49	RATES & LEVEL OF 50-59 60-64 65-69	SIGNIFICANCE- ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	45		0.55	0.71
MANAGERS AND ADMINISTRATORS	38		0.51	0.75
MANAGEMENT RELATED OCCUPATIONS	7			
PROFESSIONAL SPECIALTY OCCUPATIONS	27		0.75	
ENGINEERS	2			
ELECTRICAL AND ELECTRONIC ENGINEERS	1			
TEACHERS, LIBRARIANS, AND COUNSELORS	8			
RELIGIOUS WORKERS	4			
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	5			
ENGINEERING AND SCIENCE TECHNICIANS	3			
SALES OCCUPATIONS	51	0.89	1.51	1.01
SUPERVISORS AND PROPRIETORS, SALES	19			
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	7			
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	8			
SALES WORKERS, RETAIL AND PERSONAL SERVICES	17			
ADMINISTRATIVE SUPPORT OCCUPATIONS	23			
MAIL AND MESSAGE DISTRIBUTORS	8			
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	6			
PROTECTIVE SERVICE OCCUPATIONS	6			
GUARDS	2			
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	24	1.26		
FOOD PREPARATION AND SERVICE OCCUPATIONS	5			
COOKS	3			
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	16			
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	93	0.99	0.44*	0.81
MECHANICS AND REPAIRERS	28	1.01		0.84
AUTO MECHANICS, INCL. BODY	10			
CONSTRUCTION TRADES	35	1.28		
CARPENTERS	9			
ELECTRICIANS	5			
PAINTERS, CONSTRUCTION AND MAINTENANCE	3			
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	2			
PRECISION PRODUCTION OCCUPATIONS	30			
SUPERVISORS, PRODUCTION WORKERS	16			
MACHINISTS	7			
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	48	0.89		
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	11			
TEXTILE MACHINE OPERATORS	11			
WELDERS AND CUTTERS	6			
ASSEMBLERS	1			
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	29	0.83		
MOTOR VEHICLE OPERATORS	20			
TRUCK DRIVERS AND DRIVER-SALES WORKERS	18			
MATERIAL MOVING EQUIPMENT OPERATORS	6			
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	45			
CONSTRUCTION LABORERS	13			
FREIGHT, STOCK, AND MATERIAL HANDLERS	9			
LABORERS EXC. CONSTRUCTION	21			
		2.39*	1.68	1.73**
				2.51*
				1.33
				2.60**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF TRACHEA, BRONCHUS, AND LUNG

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	327	40-49 0.49** 50-59 0.46** 60-64 0.54** 65-69 0.49**	0.49** 0.46** 0.54** 0.49**
MANAGERS, AND ADMINISTRATORS	280	40-49 0.52** 50-59 0.52** 60-64 0.46** 65-69 0.58**	0.52** 0.52** 0.46** 0.58**
MANAGEMENT RELATED OCCUPATIONS	47	40-49 0.40** 50-59 0.36** 60-64 0.53** 65-69 0.38**	0.40** 0.36** 0.53** 0.38**
PROFESSIONAL SPECIALTY OCCUPATIONS	180	40-49 0.40** 50-59 0.36** 60-64 0.62** 65-69 0.51**	0.40** 0.36** 0.62** 0.51**
ENGINEERS	56	40-49 0.59 50-59 0.59 60-64 1.08 65-69 1.29	0.59 0.59 1.08 1.29
ELECTRICAL AND ELECTRONIC ENGINEERS	13	40-49 0.35** 50-59 0.35** 60-64 0.57 65-69 0.40**	0.35** 0.35** 0.57 0.40**
TEACHERS, LIBRARIANS, AND COUNSELORS	40	40-49 0.73 50-59 0.73 60-64 0.61 65-69 0.70	0.73 0.73 0.61 0.70
RELIGIOUS WORKERS	17	40-49 0.94 50-59 0.94 60-64 0.78 65-69 0.76**	0.94 0.94 0.78 0.76**
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	45	40-49 1.68** 50-59 1.68** 60-64 1.36 65-69 1.49**	1.68** 1.68** 1.36 1.49**
ENGINEERING AND SCIENCE TECHNICIANS	24	40-49 0.70 50-59 0.58 60-64 0.72 65-69 0.61	0.70 0.58 0.72 0.61
SALES OCCUPATIONS	371	40-49 0.78 50-59 0.78 60-64 0.82 65-69 0.67	0.78 0.78 0.82 0.67
SUPERVISORS AND PROPRIETORS, SALES	177	40-49 0.42** 50-59 0.42** 60-64 0.44** 65-69 0.36**	0.42** 0.42** 0.44** 0.36**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	60	40-49 0.69 50-59 0.69 60-64 1.01 65-69 0.85	0.69 0.69 1.01 0.85
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	36	40-49 1.11 50-59 1.30 60-64 0.85 65-69 0.80	1.11 1.30 0.85 0.80
SALES WORKERS, RETAIL AND PERSONAL SERVICES	98	40-49 1.27 50-59 1.27 60-64 0.85 65-69 0.97	1.27 1.27 0.85 0.97
SALES WORKERS, RETAIL AND PERSONAL SERVICES	122	40-49 0.96 50-59 0.96 60-64 0.85 65-69 0.80	0.96 0.96 0.85 0.80
ADMINISTRATIVE SUPPORT OCCUPATIONS	25	40-49 1.03 50-59 0.80 60-64 0.94 65-69 0.87	1.03 0.80 0.94 0.87
MAIL AND MESSAGE DISTRIBUTORS	33	40-49 1.34 50-59 1.13 60-64 1.32** 65-69 1.59**	1.34 1.13 1.32** 1.59**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	80	40-49 1.27 50-59 1.27 60-64 1.44 65-69 1.74**	1.27 1.27 1.44 1.74**
PROTECTIVE SERVICE OCCUPATIONS	40	40-49 2.02** 50-59 2.02** 60-64 1.83** 65-69 2.15**	2.02** 2.02** 1.83** 2.15**
GUARDS	239	40-49 1.77 50-59 1.77 60-64 1.39 65-69 1.35	1.77 1.77 1.39 1.35
FOOD PREPARATION AND SERVICE OCCUPATIONS	32	40-49 0.64 50-59 0.53 60-64 0.68** 65-69 0.73**	0.64 0.53 0.68** 0.73**
COOKS	25	40-49 0.42** 50-59 0.42** 60-64 0.41** 65-69 0.51**	0.42** 0.42** 0.41** 0.51**
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	174	40-49 0.81 50-59 0.81 60-64 0.82 65-69 0.88**	0.81 0.81 0.82 0.88**
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	1047	40-49 1.63 50-59 1.63 60-64 1.04 65-69 1.17	1.63 1.63 1.04 1.17
MECHANICS AND REPAIRERS	291	40-49 0.97 50-59 0.97 60-64 0.82 65-69 0.88**	0.97 0.97 0.82 0.88**
AUTO MECHANICS, INCL. BODY	108	40-49 1.85** 50-59 1.85** 60-64 1.04 65-69 1.33*	1.85** 1.85** 1.04 1.33*
CONSTRUCTION TRADES	483	40-49 0.86 50-59 0.86 60-64 1.04 65-69 1.06	0.86 0.86 1.04 1.06
CARPENTERS	171	40-49 2.56** 50-59 2.56** 60-64 1.71** 65-69 1.88**	2.56** 2.56** 1.71** 1.88**
ELECTRICIANS	36	40-49 3.15** 50-59 3.15** 60-64 2.08** 65-69 2.08	3.15** 3.15** 2.08** 2.08
PAINTERS, CONSTRUCTION AND MAINTENANCE	83	40-49 2.08 50-59 2.08 60-64 1.06 65-69 1.06	2.08 2.08 1.06 1.06
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	40	40-49 3.98** 50-59 3.98** 60-64 2.54** 65-69 2.54**	3.98** 3.98** 2.54** 2.54**
PRECISION PRODUCTION OCCUPATIONS	258	40-49 1.19 50-59 1.19 60-64 1.22 65-69 1.22	1.19 1.19 1.22 1.22
SUPERVISORS, PRODUCTION WORKERS	110	40-49 1.25 50-59 1.25 60-64 1.18 65-69 1.18	1.25 1.25 1.18 1.18
MACHINISTS	58	40-49 0.81 50-59 0.81 60-64 0.86 65-69 0.86	0.81 0.81 0.86 0.86
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	463	40-49 2.56** 50-59 2.56** 60-64 1.77** 65-69 1.77**	2.56** 2.56** 1.77** 1.77**
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	149	40-49 3.15** 50-59 3.15** 60-64 2.08** 65-69 2.08	3.15** 3.15** 2.08** 2.08
TEXTILE MACHINE OPERATORS	125	40-49 2.08 50-59 2.08 60-64 1.06 65-69 1.06	2.08 2.08 1.06 1.06
WELDERS AND CUTTERS	32	40-49 2.54** 50-59 2.54** 60-64 1.92** 65-69 1.92**	2.54** 2.54** 1.92** 1.92**
ASSEMBLERS	28	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	365	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
MOTOR VEHICLE OPERATORS	271	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
TRUCK DRIVERS AND DRIVER-SALES WORKERS	246	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
MATERIAL MOVING EQUIPMENT OPERATORS	72	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	338	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
CONSTRUCTION LABORERS	90	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
FREIGHT, STOCK, AND MATERIAL HANDLERS	51	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17
LABORERS EXC. CONSTRUCTION	169	40-49 1.17 50-59 1.17 60-64 1.17 65-69 1.17	1.17 1.17 1.17 1.17

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF PROSTATE

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	43		0.55**
MANAGERS AND ADMINISTRATORS	33	0.72	0.51**
MANAGEMENT RELATED OCCUPATIONS	10	0.73	0.82
PROFESSIONAL SPECIALTY OCCUPATIONS	27		0.62
ENGINEERS	10	0.49	1.45
ELECTRICAL AND ELECTRONIC ENGINEERS	1		0.44
TEACHERS, LIBRARIANS, AND COUNSELORS	5		0.44
RELIGIOUS WORKERS	3		0.44
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	5		0.82
ENGINEERING AND SCIENCE TECHNICIANS	3		0.95
SALES OCCUPATIONS	37	1.06	0.64*
SUPERVISORS AND PROPRIETORS, SALES	14		0.97
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	6		0.52
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	3		0.23
SALES WORKERS, RETAIL AND PERSONAL SERVICES	14		0.87
ADMINISTRATIVE SUPPORT OCCUPATIONS	13		0.36**
MAIL AND MESSAGE DISTRIBUTORS	3		0.49
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	7		0.86
PROTECTIVE SERVICE OCCUPATIONS	8		0.67
GUARDS	4		0.48
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	39	2.05	1.11
FOOD PREPARATION AND SERVICE OCCUPATIONS	5		1.36
COOKS	4		2.00
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	28		1.05
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	123	0.76	0.98
MECHANICS AND REPAIRERS	33		0.96
AUTO MECHANICS, INCL. BODY	11	1.16	0.78
CONSTRUCTION TRADES	50	1.00	1.19
CARPENTERS	12	1.28	1.15
ELECTRICIANS	6		0.82
PAINTERS, CONSTRUCTION AND MAINTENANCE	6		1.42
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	1		1.17
PRECISION PRODUCTION OCCUPATIONS	38	1.01	0.31
SUPERVISORS, PRODUCTION WORKERS	20		0.92
MACHINISTS	8		0.80
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	43	0.56	2.37
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	12		0.64*
TEXTILE MACHINE OPERATORS	9	0.78	0.77
WELDERS AND CUTTERS	2		0.68
ASSEMBLERS	4		0.77
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	36	0.96	0.81
MOTOR VEHICLE OPERATORS	30		0.97
TRUCK DRIVERS AND DRIVER-SALES WORKERS	24		1.13
MATERIAL MOVING EQUIPMENT OPERATORS	5		1.01
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	44	1.99**	0.56
CONSTRUCTION LABORERS	14		1.47
FREIGHT, STOCK, AND MATERIAL HANDLERS	6		2.46**
LABORERS EXC. CONSTRUCTION	22	2.93**	0.76
			2.25**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

DIABETES MELLITUS

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69 ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	32	0.39** 0.46
MANAGERS AND ADMINISTRATORS	26	0.39**
MANAGEMENT RELATED OCCUPATIONS	6	0.49
PROFESSIONAL SPECIALTY OCCUPATIONS	27	0.59*
ENGINEERS	2	0.29
ELECTRICAL AND ELECTRONIC ENGINEERS	2	1.35
TEACHERS, LIBRARIANS, AND COUNSELORS	12	1.01
RELIGIOUS WORKERS	2	0.37
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	3	0.41
ENGINEERING AND SCIENCE TECHNICIANS	1	0.15
SALES OCCUPATIONS	44	0.81
SUPERVISORS AND PROPRIETORS, SALES	17	0.71
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	4	0.88
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	5	1.26
SALES WORKERS, RETAIL AND PERSONAL SERVICES	18	0.35
ADMINISTRATIVE SUPPORT OCCUPATIONS	14	0.39
MAIL AND MESSAGE DISTRIBUTORS	5	1.18
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	4	0.39**
PROTECTIVE SERVICE OCCUPATIONS	7	0.79
GUARDS	4	0.52
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	45	0.67
FOOD PREPARATION AND SERVICE OCCUPATIONS	12	0.94
COOKS	10	1.61*
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	26	2.33*
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	97	0.81
MECHANICS AND REPAIRERS	26	0.56
AUTO MECHANICS, INCL. BODY	9	0.53
CONSTRUCTION TRADES	44	0.79
CARPENTERS	10	1.14
ELECTRICIANS	1	1.55
PAINTERS, CONSTRUCTION AND MAINTENANCE	4	0.92
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	6	0.75
PRECISION PRODUCTION OCCUPATIONS	27	0.18
SUPERVISORS, PRODUCTION WORKERS	4	0.82
MACHINISTS	11	1.63
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	47	0.61
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	14	0.14**
TEXTILE MACHINE OPERATORS	14	3.30**
WELDERS AND CUTTERS	4	0.72
ASSEMBLERS	5	1.04
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	43	1.23
MOTOR VEHICLE OPERATORS	36	1.35
TRUCK DRIVERS AND DRIVER-SALES WORKERS	30	0.94
MATERIAL MOVING EQUIPMENT OPERATORS	6	1.08
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	53	1.24
CONSTRUCTION LABORERS	10	1.13
FREIGHT, STOCK, AND MATERIAL HANDLERS	9	0.66
LABORERS EXC. CONSTRUCTION	32	1.77
		1.24
		3.82**
		4.50**
		3.80**
		2.09*
		1.64
		1.38
		3.02**
		1.22
		1.15
		1.30
		1.27
		1.04
		0.65
		0.57
		0.71

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

PNEUMONIA AND INFLUENZA

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	31		0.30**
MANAGERS AND ADMINISTRATORS	21		0.24**
MANAGEMENT RELATED OCCUPATIONS	10		0.63
PROFESSIONAL SPECIALTY OCCUPATIONS	26		0.46**
ENGINEERS	4	0.65	0.42
ELECTRICAL AND ELECTRONIC ENGINEERS	1		0.39
TEACHERS, LIBRARIANS, AND COUNSELORS	6		0.42
RELIGIOUS WORKERS	4		0.49
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	5		0.49
ENGINEERING AND SCIENCE TECHNICIANS	1		0.12
SALES OCCUPATIONS	46	0.69 0.52	0.82 0.63*
SUPERVISORS AND PROPRIETORS, SALES	18		1.98 0.95
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	8		0.55
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	6		0.38
SALES WORKERS, RETAIL AND PERSONAL SERVICES	14		0.69
ADMINISTRATIVE SUPPORT OCCUPATIONS	15		0.33**
MAIL AND MESSAGE DISTRIBUTORS	1		0.13
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	7		0.70
PROTECTIVE SERVICE OCCUPATIONS	6		0.38
GUARDS	4		0.49
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	46	1.11	1.14
FOOD PREPARATION AND SERVICE OCCUPATIONS	11		2.23*
COOKS	11		3.91**
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	34	1.24	1.18
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	140	0.78 0.77	0.96 0.95
MECHANICS AND REPAIRERS	30		0.84
AUTO MECHANICS, INCL. BODY	13		0.57*
CONSTRUCTION TRADES	78	1.56	1.09
CARPENTERS	23		1.45*
ELECTRICIANS	9		1.35
PAINTERS, CONSTRUCTION AND MAINTENANCE	15		1.54
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	10		2.30*
PRECISION PRODUCTION OCCUPATIONS	31		2.31*
SUPERVISORS, PRODUCTION WORKERS	9		0.57*
MACHINISTS	8		0.26**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	64	1.08	1.87
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	22	0.87	0.78
TEXTILE MACHINE OPERATORS	16		1.29
WELDERS AND CUTTERS	4		1.13
ASSEMBLERS	3		1.14
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	37		0.49
MOTOR VEHICLE OPERATORS	26	0.97	0.72
TRUCK DRIVERS AND DRIVER-SALES WORKERS	26	1.08	0.71
MATERIAL MOVING EQUIPMENT OPERATORS	22	1.09	0.67
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	9		0.77
CONSTRUCTION LABORERS	75	1.92	1.86*
FREIGHT, STOCK, AND MATERIAL HANDLERS	28	4.77**	2.17**
LABORERS EXC. CONSTRUCTION	9		3.92**
	32	2.64**	2.93**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69 ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	68	0.21** 0.36** 0.40** 0.45**
MANAGERS, ADMINISTRATORS	54	0.63
MANAGEMENT RELATED OCCUPATIONS	14	
PROFESSIONAL SPECIALTY OCCUPATIONS	48	
ENGINEERS	11	
ELECTRICAL AND ELECTRONIC ENGINEERS	3	
TEACHERS, LIBRARIANS, AND COUNSELORS	9	
RELIGIOUS WORKERS	6	
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	12	
ENGINEERING AND SCIENCE TECHNICIANS	4	
SALES OCCUPATIONS	82	0.45* 0.74 0.57** 0.91
SUPERVISORS AND PROPRIETORS, SALES	39	
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	15	
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	11	
SALES WORKERS, RETAIL AND PERSONAL SERVICES	17	
ADMINISTRATIVE SUPPORT OCCUPATIONS	43	0.42* 0.55*
MAIL AND MESSAGE DISTRIBUTORS	8	
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	10	
PROTECTIVE SERVICE OCCUPATIONS	23	0.79
GUARDS	13	
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	74	1.31 0.83 0.66
FOOD PREPARATION AND SERVICE OCCUPATIONS	16	
COOKS	10	
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	53	1.10 1.02 0.58
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	333	1.51** 0.93 1.05
MECHANICS AND REPAIRERS	88	1.30 0.71 0.79
AUTO MECHANICS, INCL. BODY	36	1.86 1.52 1.62*
CONSTRUCTION TRADES	158	1.60* 1.44* 1.54**
CARPENTERS	67	2.55** 1.70 1.86**
ELECTRICIANS	7	
PAINTERS, CONSTRUCTION AND MAINTENANCE	33	2.85** 2.30*
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	19	
PRECISION PRODUCTION OCCUPATIONS	81	1.20 0.48* 0.79
SUPERVISORS, PRODUCTION WORKERS	28	0.59 0.60
MACHINISTS	18	
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	138	1.09 0.67 0.93
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	48	2.13* 0.95 1.37
TEXTILE MACHINE OPERATORS	38	1.90 1.23
WELDERS AND CUTTERS	6	
ASSEMBLERS	13	
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	97	0.94 1.22 1.05
MOTOR VEHICLE OPERATORS	71	0.91 1.58 0.77
TRUCK DRIVERS AND DRIVER-SALES WORKERS	64	0.87 1.59 0.80
MATERIAL MOVING EQUIPMENT OPERATORS	16	
MATERIALS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	100	1.49 1.57 1.41*
CONSTRUCTION LABORERS	23	3.04** 3.04**
FREIGHT, STOCK, AND MATERIAL HANDLERS	16	
LABORERS EXC. CONSTRUCTION	53	2.70** 2.26* 2.32**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CHRONIC LIVER DISEASE AND CIRRHOSIS

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49	RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
			50-59	60-64	65-69	
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	57		0.38**	0.49	0.75	0.42**
MANAGERS AND ADMINISTRATORS	40		0.33**	0.43*	0.69	0.36**
MANAGEMENT RELATED OCCUPATIONS	17					0.80
PROFESSIONAL SPECIALTY OCCUPATIONS	39		0.46*	0.87		0.50**
ENGINEERS	8					0.56
ELECTRICAL AND ELECTRONIC ENGINEERS	2					0.57
TEACHERS, LIBRARIANS, AND COUNSELORS	10					0.50
RELIGIOUS WORKERS	1					0.10
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	9					0.62
ENGINEERING AND SCIENCE TECHNICIANS	3					0.34
SALES OCCUPATIONS	69	0.79	0.82	0.68	0.86	0.79
SUPERVISORS AND PROPRIETORS, SALES	27		1.30			1.27
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	9					0.48
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	6		1.25			0.29*
SALES WORKERS, RETAIL AND PERSONAL SERVICES	27		0.48			1.15
ADMINISTRATIVE SUPPORT OCCUPATIONS	25					0.42**
MAIL AND MESSAGE DISTRIBUTORS	6					0.58
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	6					0.48
PROTECTIVE SERVICE OCCUPATIONS	16					0.90
GUARDS	11					1.49
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	39	1.99*	0.87			0.98
FOOD PREPARATION AND SERVICE OCCUPATIONS	6					0.93
COOKS	2					0.51
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	27	2.46*	1.00	0.87	0.90	1.10
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	187	0.93	0.76			0.85
MECHANICS AND REPAIRERS	47	0.87	0.70			0.65*
AUTO MECHANICS, INCL. BODY	22		2.39*			1.44
CONSTRUCTION TRADES	94	1.35	1.09	1.63	1.68	1.35*
CARPENTERS	30	2.33*				1.52
ELECTRICIANS	8					1.04
PAINTERS, CONSTRUCTION AND MAINTENANCE	11					1.46
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	7					1.22
PRECISION PRODUCTION OCCUPATIONS	43	0.67	0.63			0.58**
SUPERVISORS, PRODUCTION WORKERS	15					0.32**
MACHINISTS	8					1.45
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	75	0.95	0.53*	0.64	0.87	0.71*
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	21					1.04
TEXTILE MACHINE OPERATORS	17					0.96
WELDERS AND CUTTERS	3					0.42
ASSEMBLERS	5					0.61
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	66	0.83	1.18		1.44	0.98
MOTOR VEHICLE OPERATORS	57	1.05	1.32			1.15
TRUCK DRIVERS AND DRIVER-SALES WORKERS	51	0.97	1.31			1.13
MATERIAL MOVING EQUIPMENT OPERATORS	8					0.54
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	85	2.37**	2.23**	1.62		1.97**
CONSTRUCTION LABORERS	23					2.45**
FREIGHT, STOCK, AND MATERIAL HANDLERS	9					0.75
LABORERS EXC. CONSTRUCTION	45	3.90**	4.46**			3.53**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

MOTOR VEHICLE ACCIDENTS

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	55	40-49	65-69
MANAGERS AND ADMINISTRATORS	42	0.46**	0.64
MANAGEMENT RELATED OCCUPATIONS	13	0.49*	0.39**
PROFESSIONAL SPECIALTY OCCUPATIONS	39		0.63
ENGINEERS	13	0.41*	0.51**
ELECTRICAL AND ELECTRONIC ENGINEERS	5		0.92
TEACHERS, LIBRARIANS, AND COUNSELORS	5		1.43
RELIGIOUS WORKERS	5		0.24*
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	4		0.55
ENGINEERING AND SCIENCE TECHNICIANS	2		0.24*
SALES OCCUPATIONS	48	0.38*	0.19
SUPERVISORS AND PROPRIETORS, SALES	16	0.63	0.56**
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	7		0.75
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	4		0.39
SALES WORKERS, RETAIL AND PERSONAL SERVICES	20		0.19**
ADMINISTRATIVE SUPPORT OCCUPATIONS	22	0.57	0.87
MAIL AND MESSAGE DISTRIBUTORS	3		0.41**
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	11		0.28
PROTECTIVE SERVICE OCCUPATIONS	11		0.99
GUARDS	7		0.59
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	44	0.93	1.01
FOOD PREPARATION AND SERVICE OCCUPATIONS	5	1.11	1.02
COOKS	5		0.82
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	36	1.64	1.45
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	181	0.92	1.26
MECHANICS AND REPAIRERS	49	0.60	0.84
AUTO MECHANICS, INCL. BODY	24		0.71
CONSTRUCTION TRADES	93	1.35	1.60
CARPENTERS	33	2.20*	1.40*
ELECTRICIANS	10	1.71*	1.81**
PAINTERS, CONSTRUCTION AND MAINTENANCE	20	2.08*	1.19
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	7		2.89**
PRECISION PRODUCTION OCCUPATIONS	39	0.59	1.11
SUPERVISORS, PRODUCTION WORKERS	15		0.54**
MACHINISTS	10		0.32**
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	72	0.55*	1.89
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	24	0.83	0.71*
TEXTILE MACHINE OPERATORS	21	1.76	1.30
WELDERS AND CUTTERS	7		1.31
ASSEMBLERS	1		1.18
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	107	1.89**	0.11
MOTOR VEHICLE OPERATORS	94	1.73*	1.70**
TRUCK DRIVERS AND DRIVER-SALES WORKERS	92	2.20**	2.01**
MATERIAL MOVING EQUIPMENT OPERATORS	10	2.36**	2.14**
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	89	2.34**	0.70
CONSTRUCTION LABORERS	26	2.87**	2.21**
FREIGHT, STOCK, AND MATERIAL HANDLERS	15	3.82**	2.89**
LABORERS EXC. CONSTRUCTION	44	4.98**	1.29
			3.77**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ALL OTHER ACCIDENTS AND ADVERSE EFFECTS

OCCUPATION	TOTAL DEATHS	-RATIO OF 40-49 50-59 60-64 65-69	RATES & LEVEL OF SIGNIFICANCE- 50-59 60-64 65-69	ADJUSTED
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	43	0.19**	0.34**	0.25**
MANAGERS AND ADMINISTRATORS	37	0.30**		0.27**
MANAGEMENT RELATED OCCUPATIONS	6			0.22**
PROFESSIONAL SPECIALTY OCCUPATIONS	44	0.43*		0.44**
ENGINEERS	8			0.47
ELECTRICAL AND ELECTRONIC ENGINEERS	5			1.14
TEACHERS, LIBRARIANS, AND COUNSELORS	7			0.25**
RELIGIOUS WORKERS	5			0.42
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	10			0.43
ENGINEERING AND SCIENCE TECHNICIANS	4			0.41
SALES OCCUPATIONS	53	0.49*	0.57	0.46**
SUPERVISORS AND PROPRIETORS, SALES	31			1.13
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	7			0.30*
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	6			0.23**
SALES WORKERS, RETAIL AND PERSONAL SERVICES	9			0.30**
ADMINISTRATIVE SUPPORT OCCUPATIONS	21			0.29**
MAIL AND MESSAGE DISTRIBUTORS	2			0.21
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	7			0.47
PROTECTIVE SERVICE OCCUPATIONS	8			0.31*
GUARDS	5			0.28
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	72	2.13**	1.53	1.44*
FOOD PREPARATION AND SERVICE OCCUPATIONS	12			1.54
COOKS	12			2.70**
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	52	2.85**	1.47	1.62**
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	214	0.81	0.79	0.76**
MECHANICS AND REPAIRERS	42	0.56	0.44*	0.46**
AUTO MECHANICS, INCL. BODY	19			0.98
CONSTRUCTION TRADES	128	1.56*	1.16	1.50**
CARPENTERS	41			1.65*
ELECTRICIANS	14			1.42
PAINTERS, CONSTRUCTION AND MAINTENANCE	14			1.58
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	7			0.90
PRECISION PRODUCTION OCCUPATIONS	42	0.50*	0.43*	0.46**
SUPERVISORS, PRODUCTION WORKERS	18			0.31**
MACHINISTS	7			1.05
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	99	0.80	0.76	0.76*
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	27		1.44	1.14
TEXTILE MACHINE OPERATORS	21			1.04
WELDERS AND CUTTERS	8			1.00
ASSEMBLERS	2			0.20
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	78	0.97	0.92	0.90
MOTOR VEHICLE OPERATORS	52	0.68	0.83	0.82
TRUCK DRIVERS AND DRIVER-SALES WORKERS	50	0.73	0.80	0.87
MATERIAL MOVING EQUIPMENT OPERATORS	16			0.85
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	142	3.78**	2.18**	2.76**
CONSTRUCTION LABORERS	47	7.56**	3.01**	4.12**
FREIGHT, STOCK, AND MATERIAL HANDLERS	14			0.94
LABORERS EXC. CONSTRUCTION	72	5.55**	3.12**	4.51**
			4.98**	5.09**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

SUICIDE

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-				ADJUSTED
		40-49	50-59	60-64	65-69	
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	79	0.73	0.71	0.49	0.73	0.68*
MANAGERS AND ADMINISTRATORS	65	0.74	0.68		0.81	0.68*
MANAGEMENT RELATED OCCUPATIONS	14					0.72
PROFESSIONAL SPECIALTY OCCUPATIONS	52		0.80			0.75
ENGINEERS	10					0.84
ELECTRICAL AND ELECTRONIC ENGINEERS	1					0.31
TEACHERS, LIBRARIANS, AND COUNSELORS	13					0.68
RELIGIOUS WORKERS	3					0.33
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	8					0.46
ENGINEERING AND SCIENCE TECHNICIANS	2					0.33
SALES OCCUPATIONS	83	1.11	1.16	0.97	1.20	1.11
SUPERVISORS AND PROPRIETORS, SALES	32		1.89			1.69*
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	19					1.19
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	8					0.42
SALES WORKERS, RETAIL AND PERSONAL SERVICES	23					1.06
ADMINISTRATIVE SUPPORT OCCUPATIONS	17					0.32**
MAIL AND MESSAGE DISTRIBUTORS	3					0.32
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	4					0.35
PROTECTIVE SERVICE OCCUPATIONS	13					0.84
GUARDS	5					0.90
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	35	1.31	0.90			0.95
FOOD PREPARATION AND SERVICE OCCUPATIONS	3					0.54
COOKS	2					0.73
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	28	2.06	0.58*	0.93	0.69	1.25
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	158	0.97	0.83			0.79*
MECHANICS AND REPAIRERS	50	0.86				0.79
AUTO MECHANICS, INCL. BODY	16					1.18
CONSTRUCTION TRADES	65	1.66*	0.57	0.99		1.02
CARPENTERS	23	2.78**				1.41
ELECTRICIANS	8					1.10
PAINTERS, CONSTRUCTION AND MAINTENANCE	10					1.56
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	7					1.21
PRECISION PRODUCTION OCCUPATIONS	42			1.02		0.65**
SUPERVISORS, PRODUCTION WORKERS	14					0.35**
MACHINISTS	9					1.81
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	68	0.51	0.50			0.73
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	24				1.02	1.36
TEXTILE MACHINE OPERATORS	18	0.72	0.79			1.18
WELDERS AND CUTTERS	7		2.19			1.27
ASSEMBLERS	1					0.12
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	58	0.60	1.44			0.97
MOTOR VEHICLE OPERATORS	46	0.75	1.56			1.02
TRUCK DRIVERS AND DRIVER-SALES WORKERS	37		1.37			0.90
MATERIAL MOVING EQUIPMENT OPERATORS	8					0.62
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	36	0.77	1.08	1.27		0.89
CONSTRUCTION LABORERS	11					1.27
FREIGHT, STOCK, AND MATERIAL HANDLERS	7					0.65
LABORERS EXC. CONSTRUCTION	16					1.31

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

HOMICIDE

OCCUPATION	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL OCCUPATIONS	22			65-69	0.35**
MANAGERS AND ADMINISTRATORS	19				0.38**
MANAGEMENT RELATED OCCUPATIONS	3				0.30
PROFESSIONAL SPECIALTY OCCUPATIONS	13				0.35**
ENGINEERS	3				0.60
ELECTRICAL AND ELECTRONIC ENGINEERS	2				2.33
TEACHERS, LIBRARIANS, AND COUNSELORS	6				0.58
TECHNICIANS AND RELATED SUPPORT OCCUPATIONS	2				0.19
ENGINEERING AND SCIENCE TECHNICIANS	1				0.20
SALES OCCUPATIONS	31	0.81			0.82
SUPERVISORS AND PROPRIETORS, SALES	18				1.95*
SALES REPRESENTATIVES, FINANCE AND BUSINESS SERVICES	4				0.49
SALES REPRESENTATIVES, COMMODITIES, EXC. RETAIL	1				0.10
SALES WORKERS, RETAIL AND PERSONAL SERVICES	8				0.81
ADMINISTRATIVE SUPPORT OCCUPATIONS	5				0.19**
MAIL AND MESSAGE DISTRIBUTORS	1				0.20
TRAFFIC, SHIPPING, STOCK AND INVENTORY CLERKS	1				0.19
PROTECTIVE SERVICE OCCUPATIONS	7				0.88
GUARDS	3				1.34
SERVICE OCCUPATIONS EXC. PROTECTIVE AND HOUSEHOLD	21		1.53		1.20
FOOD PREPARATION AND SERVICE OCCUPATIONS	3				1.09
COOKS	2				1.28
CLEANING AND BUILDING SERVICE WORKERS, EXC. HOUSEHOLD	16				1.46
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS	81	0.73	0.81		0.79
MECHANICS AND REPAIRERS	18				0.54
AUTO MECHANICS, INCL. BODY	6				0.79
CONSTRUCTION TRADES	52	1.54	2.02*		1.73**
CARPENTERS	22	3.35**			2.71**
ELECTRICIANS	1				0.27
PAINTERS, CONSTRUCTION AND MAINTENANCE	7				2.27
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS	6				2.21
PRECISION PRODUCTION OCCUPATIONS	11				0.32**
SUPERVISORS, PRODUCTION WORKERS	2				0.10*
MACHINISTS	5				2.04
MACHINE OPERATORS (EXC. PRECISION), ASSEMBLERS, INSPECTORS	32	0.74	0.68		0.68
TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS	8				0.93
TEXTILE MACHINE OPERATORS	6				0.83
WELDERS AND CUTTERS	2				0.67
ASSEMBLERS	4				1.04
TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS	44	1.62	1.39		1.41
MOTOR VEHICLE OPERATORS	33	1.72	1.20		1.40
TRUCK DRIVERS AND DRIVER-SALES WORKERS	29	1.64			1.32
MATERIAL MOVING EQUIPMENT OPERATORS	10				1.49
HANDLERS, EQUIPMENT CLEANERS, HELPERS AND LABORERS	66	4.29**	4.02**		3.85**
CONSTRUCTION LABORERS	17	6.31**			4.14**
FREIGHT, STOCK, AND MATERIAL HANDLERS	8				1.49
LABORERS EXC. CONSTRUCTION	35	6.92**	7.97**		6.82**

APPENDIX V

TABLES FOR INDUSTRY GROUPS

1984 - 1986

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-				ADJUSTED
		40-49	50-59	60-64	65-69	
CONSTRUCTION	4872	1.56**	1.42**	1.29**	1.25**	1.35**
MANUFACTURING	9969	0.65**	0.68**	0.68**	0.72**	0.69**
FOOD INDUSTRIES	554	1.10	0.98	1.01	0.84	0.96
YARN, THREAD, AND FABRIC MILLS	2821	0.96	1.04	0.96	0.95	0.98
OTHER TEXTILE MILL PRODUCTS	317	0.28**	0.35**	0.27**	0.25**	0.29**
PAPER AND ALLIED PRODUCTS	338	0.57**	0.58**	0.84	0.79	0.71**
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	245	0.57*	0.78	0.72	0.73*	0.72**
CHEMICALS AND ALLIED PRODUCTS	314	0.48**	0.55**	0.64**	0.91	0.68**
LOGGING	316	1.94**	1.96**	1.48**	1.46**	1.68**
SAWMILLS, PLANING MILLS, AND MILLWORK	495	1.55**	1.44**	0.89	0.85	1.13**
FURNITURE AND FIXTURES	1196	0.89	0.72**	0.67**	0.68**	0.72**
PRIMARY IRON AND STEEL INDUSTRIES	246	3.33**	2.63**	2.22**	4.23**	3.11**
FABRICATED METAL INDUSTRIES	238	0.58**	0.51**	0.55**	0.70*	0.59**
MACHINERY EXCEPT ELECTRICAL	513	0.54**	0.56**	0.57**	0.50**	0.54**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	449	0.61**	0.48**	0.64**	0.65**	0.59**
TRANSPORTATION EQUIPMENT	292	0.53*	0.66**	1.30	1.70**	1.13
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	3304	0.88	0.89**	0.96	1.21**	1.00
TRUCKING SERVICE AND WAREHOUSING	1311	1.09	1.04	1.27**	1.48**	1.24**
U.S. POSTAL SERVICE	313	0.45**	0.54**	0.61**	0.86	0.64**
COMMUNICATIONS	258	0.50**	0.62**	0.75	0.80	0.69**
ELECTRIC AND GAS UTILITIES	314	0.64**	0.64**	0.69*	0.86	0.72**
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	291	1.38	1.22	0.77	0.87	1.01**
WHOLESALE TRADE	827	0.35**	0.37**	0.38**	0.36**	0.37**
RETAIL TRADE	3366	0.84**	0.84**	0.75**	0.72**	0.78**
HARDWARE AND BUILDING MATERIAL RETAILING	248	0.97	0.78	0.74	0.59**	0.74**
GENERAL MERCHANDISE STORES	146	0.42**	0.46**	0.37**	0.54**	0.45**
FOOD, BAKERY, AND DAIRY STORES	557	0.74	0.99	0.79**	0.75**	0.83**
AUTOMOTIVE DEALERS AND SUPPLY STORES	577	0.79	0.77**	0.74**	0.66**	0.73**
GASOLINE SERVICE STATIONS	309	0.87	0.98	0.79	0.76*	0.85*
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	359	1.11	0.89	0.94	0.86	0.93
EATING AND DRINKING PLACES	469	1.56**	1.27*	1.14	1.34**	1.29**
FINANCE, INSURANCE, AND REAL ESTATE	742	0.39**	0.52**	0.59**	0.51**	0.52**
INSURANCE	313	0.36**	0.52**	0.58**	0.54**	0.52**
BUSINESS AND REPAIR SERVICES	1319	1.12	1.07	1.12	0.78**	1.00
AUTOMATIVE REPAIR AND SERVICES	797	2.11**	1.90**	1.90**	1.39**	1.77**
PERSONAL SERVICES	676	1.68**	1.32**	0.91	0.94	1.14**
LAUNDRY, CLEANING, AND GARMENT SERVICES	167	1.24	1.41	0.84	1.19	1.17
PROFESSIONAL AND RELATED SERVICES	2071	0.48**	0.52**	0.56**	0.47**	0.51**
HOSPITALS	337	0.62*	0.52**	0.64**	0.58**	0.58**
OTHER HEALTH SERVICES	229	0.48**	0.54**	0.47**	0.45**	0.48**
ELEMENTARY AND SECONDARY SCHOOLS	544	0.49**	0.56**	0.63**	0.58**	0.57**
COLLEGES AND UNIVERSITIES	316	0.42**	0.42**	0.51**	0.39**	0.43**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	370	0.48**	0.64**	0.65**	0.44**	0.56**
PUBLIC ADMINISTRATION	1700	0.73**	0.77**	0.94	1.02	0.89**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

TOTAL DISEASES OF THE HEART

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
CONSTRUCTION	1740	40-49	65-69
MANUFACTURING	1740	1.27*	1.15*
FOOD INDUSTRIES	224	0.67**	0.74**
YARN, THREAD, AND FABRIC MILLS	1185	1.33	0.77
OTHER TEXTILE MILL PRODUCTS	140	1.13	1.02
PAPER AND ALLIED PRODUCTS	128	0.29**	0.24**
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	104	0.72	0.71
CHEMICALS AND ALLIED PRODUCTS	136	0.96	0.69**
LOGGING	100	0.58	0.93
SAWMILLS, PLANING MILLS, AND MILLWORK	175	1.66	1.54
FURNITURE AND FIXTURES	498	1.62	1.37*
PRIMARY IRON AND STEEL INDUSTRIES	94	0.81	0.83
FABRICATED METAL INDUSTRIES	186	0.76**	0.78**
MACHINERY EXCEPT ELECTRICAL	176	2.51**	4.46**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	111	0.51**	0.78
TRANSPORTATION EQUIPMENT	1322	0.54**	0.77
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	510	0.77	1.57*
TRUCKING SERVICE AND WAREHOUSING	136	0.94	1.29**
U.S. POSTAL SERVICE	127	1.06	1.47**
COMMUNICATIONS	131	0.59*	0.98
ELECTRIC AND GAS UTILITIES	95	0.75	0.91
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	329	0.78	1.04
WHOLESALE TRADE	1352	1.02	0.72
RETAIL TRADE	109	0.37**	0.37**
HARDWARE AND BUILDING MATERIAL RETAILING	57	0.86*	0.74**
GENERAL MECHANISE STORES	217	0.90	0.67
FOOD, BAKERY, AND DAIRY STORES	241	0.47*	0.26**
AUTOMOTIVE DEALERS AND SUPPLY STORES	119	1.00	0.68*
GASOLINE SERVICE STATIONS	162	0.73	0.78
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	165	1.17	0.64
EATING AND DRINKING PLACES	278	1.00	1.13
FINANCE, INSURANCE, AND REAL ESTATE	112	1.20	0.85
INSURANCE	295	0.50**	0.55**
BUSINESS AND REPAIR SERVICES	221	0.47**	0.44**
AUTOMATIVE REPAIR AND SERVICES	58	0.96	1.27*
PERSONAL SERVICES	805	1.76**	2.14**
LAUNDRY, CLEANING, AND GARMENT SERVICES	122	1.02	0.78
PROFESSIONAL AND RELATED SERVICES	122	1.47	0.84
HOSPITALS	205	0.41**	0.86
OTHER HEALTH SERVICES	129	0.84	0.48**
ELEMENTARY AND SECONDARY SCHOOLS	167	0.46**	0.50**
COLLEGES AND UNIVERSITIES	697	0.49**	0.54**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS		0.55**	0.42**
PUBLIC ADMINISTRATION		0.54**	0.56**
		0.73	0.46**
		0.81*	0.64**
		0.90	0.94
			1.07
			0.51**
			0.54**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.46**
			0.83**
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**
			0.48**
			0.85
			0.79**
			0.85
			1.08
			1.18
			0.50**
			0.48**
			0.94
			1.70**
			0.94
			1.18
			0.50**

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ACUTE MYOCARDIAL INFARCTION

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
CONSTRUCTION	782	1.06	1.22*	1.07	1.13*
MANUFACTURING	2025	0.73**	0.75**	0.81**	0.76**
FOOD INDUSTRIES	105	1.30	1.12	0.95	0.96
YARN, THREAD, AND FABRIC MILLS	660	1.25	1.27*	1.25*	1.24**
OTHER TEXTILE MILL PRODUCTS	74		0.52**	0.30**	0.36**
PAPER AND ALLIED PRODUCTS	69		0.66	0.80	0.77
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	49		0.91	0.77	0.77
CHEMICALS AND ALLIED PRODUCTS	63		0.46*	0.92	0.71*
LOGGING	49		1.06	1.38	1.37
SAWMILLS, PLANING MILLS, AND MILLWORK	80		0.85	0.84	0.96
FURNITURE AND FIXTURES	281	2.03	1.02	0.87	0.90
PRIMARY IRON AND STEEL INDUSTRIES	47	0.97	2.09	3.05**	4.19**
FABRICATED METAL INDUSTRIES	46		0.49	0.69	0.63*
MACHINERY EXCEPT ELECTRICAL	89	0.45*	0.53**	0.60*	0.50**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	90		0.56*	0.65	0.72
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	54		0.75	1.48	1.41
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	634	1.01	0.95	0.86	1.03
TRUCKING SERVICE AND WAREHOUSING	241	1.15	1.14	1.13	1.19
U.S. POSTAL SERVICE	65		0.69	0.59	0.69*
COMMUNICATIONS	64	1.13	0.66	0.94	0.91
ELECTRIC AND GAS UTILITIES	64	1.08	0.80	0.46	0.77
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	40		1.08		0.74
RETAIL TRADE	148	0.25**	0.33**	0.35**	0.35**
WHOLESALE TRADE	685	1.19	0.93	0.72**	0.85**
HARDWARE AND BUILDING MATERIAL RETAILING	46		0.82	0.60	0.73
GENERAL MERCHANDISE STORES	23				0.38**
FOOD, BAKERY, AND DAIRY STORES	107	1.09	1.05	0.70	0.85
AUTOMOTIVE DEALERS AND SUPPLY STORES	129	1.10	0.93	0.80	0.87
GASOLINE SERVICE STATIONS	66		1.35	0.66	0.98
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	78	2.01*	0.97	0.83	1.07
EATING AND DRINKING PLACES	83	1.41	1.29	1.05	1.21
FINANCE, INSURANCE, AND REAL ESTATE	126	0.63	0.39**	0.47**	0.46**
BUSINESS AND REPAIR SERVICES	50		0.27**	0.49*	0.44**
AUTOMATIVE REPAIR AND SERVICES	226	0.79	0.95	1.20	0.91
PERSONAL SERVICES	142	1.93*	1.60*	2.27**	1.68**
LAUNDRY, CLEANING, AND GARMENT SERVICES	97	1.32	1.00	0.79	0.86
PROFESSIONAL AND RELATED SERVICES	28		1.68		1.08
HOSPITALS	384	0.38**	0.54**	0.58**	0.50**
OTHER HEALTH SERVICES	57		0.30**	0.66	0.52**
ELEMENTARY AND SECONDARY SCHOOLS	38		0.53	0.47*	0.42**
COLLEGES AND UNIVERSITIES	92		0.41**	0.60*	0.54**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	53		0.56*	0.34**	0.33**
PUBLIC ADMINISTRATION	95		0.92	1.03	0.76*
	354	0.85	0.86	1.00	1.14

1984 - 1986

OTHER FORMS OF ISCHEMIC HEART DISEASE

INDUSTRY	TOTAL DEATHS	-RATIO OF 40-49	RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
			50-59	60-64	65-69	
CONSTRUCTION	505	1.24	1.49**	1.24	1.29**	1.33**
MANUFACTURING	1002	0.58**	0.67**	0.58**	0.69**	0.64**
FOOD INDUSTRIES	52		1.03	0.74	0.69	0.85
YARN, THREAD, AND FABRIC MILLS	289		0.93	0.89	0.94	0.93
OTHER TEXTILE MILL PRODUCTS	43	1.03	0.51*	0.36**	0.29**	0.37**
PAPER AND ALLIED PRODUCTS	33			0.80	0.65	0.66
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	26		1.11			0.73
CHEMICALS AND ALLIED PRODUCTS	43		0.88	0.97	0.81	0.87
LOGGING	22					1.11
SAWMILLS, PLANING MILLS, AND MILLWORK	35			0.88	0.57	0.71
FURNITURE AND FIXTURES	122	0.76	0.57*	0.56*	0.83	0.67**
PRIMARY IRON AND STEEL INDUSTRIES	23					2.72**
FABRICATED METAL INDUSTRIES	29					0.71
MACHINERY EXCEPT ELECTRICAL	61			0.43*	0.67	0.62**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	47		0.81	0.49	0.62	0.58**
TRANSPORTATION EQUIPMENT	28		0.68		1.57	1.02
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	374	0.73	0.94	1.13	1.33*	1.10
TRUCKING SERVICE AND WAREHOUSING	143	0.89	1.00	1.61*	1.56*	1.35**
U.S. POSTAL SERVICE	41			0.64	1.16	0.83
COMMUNICATIONS	34		0.72	1.06	1.25	0.95
ELECTRIC AND GAS UTILITIES	42		0.85	1.03	1.19	0.96
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	35		1.25	1.02		1.14
WHOLESALE TRADE	106	0.61	0.42**	0.46**	0.42**	0.45**
RETAIL TRADE	375	1.24	0.82	0.76*	0.76*	0.82**
HARDWARE AND BUILDING MATERIAL RETAILING	38		1.25		0.93	1.08
GENERAL MERCHANDISE STORES	21		0.64	0.68	1.02	0.62
FOOD, BAKERY, AND DAIRY STORES	58		0.50	0.76	0.81	0.79
AUTOMOTIVE DEALERS AND SUPPLY STORES	64	1.55			0.81	0.77
GASOLINE SERVICE STATIONS	29			1.24	0.67	0.74
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	43		1.01		0.78	1.05
EATING AND DRINKING PLACES	47		1.57	0.74	1.13	1.22
FINANCE, INSURANCE, AND REAL ESTATE	95		0.73	0.79	0.49**	0.63**
BUSINESS AND REPAIR SERVICES	45		0.89	0.79	0.52	0.70
AUTOMATIVE REPAIR AND SERVICES	147	1.69	1.17	1.50*	0.50**	1.07
PERSONAL SERVICES	84	2.66**	2.13**	1.96*	1.11	1.78**
LAUNDRY, CLEANING, AND GARMENT SERVICES	65		1.01	0.85	0.94	0.99
PROFESSIONAL AND RELATED SERVICES	19					1.27
HOSPITALS	227	0.35**	0.56**	0.53**	0.53**	0.52**
OTHER HEALTH SERVICES	43		0.73	0.59	0.73	0.69
ELEMENTARY AND SECONDARY SCHOOLS	24				0.56	0.48**
COLLEGES AND UNIVERSITIES	55		0.85	0.55	0.35**	0.54**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	36			0.78	0.41*	0.48**
PUBLIC ADMINISTRATION	34			0.62	0.54	0.46**
	184	1.10	0.73	0.87	1.05	0.91

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

OTHER DISEASE OF HEART

INDUSTRY	TOTAL DEATHS	-RATIO OF 40-49	OF RATES & LEVEL OF 50-59	SIGNIFICANCE- 60-64	ADJUSTED 65-69
CONSTRUCTION	453	1.71**	1.55**	1.38*	1.36**
MANUFACTURING	935	0.63**	0.64**	0.69**	0.70**
FOOD INDUSTRIES	67	1.45	1.47	1.24	1.26
YARN, THREAD, AND FABRIC MILLS	236	0.98	0.89	0.90	0.88
OTHER TEXTILE MILL PRODUCTS	23				0.23**
PAPER AND ALLIED PRODUCTS	26				0.58*
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	29				0.92
CHEMICALS AND ALLIED PRODUCTS	30				0.75
LOGGING	29				1.65*
SAWMILLS, PLANING MILLS, AND MILLWORK	60				1.48*
FURNITURE AND FIXTURES	28				0.60**
PRIMARY IRON AND STEEL INDUSTRIES	95				3.85**
FABRICATED METAL INDUSTRIES	19				0.53*
MACHINERY EXCEPT ELECTRICAL	36				0.42**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	39				0.60*
TRANSPORTATION EQUIPMENT	29				1.20
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	314				1.04
TRUCKING SERVICE, COMMUNICATION, OTHER PUBLIC UTILITIES	126	0.83	0.94	0.96	1.29
U.S. POSTAL SERVICE	30	1.29	0.97	1.31	1.69*
COMMUNICATIONS	29		0.96	0.87	0.77
ELECTRIC AND GAS UTILITIES	25				0.85
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	20				0.64
WHOLESALE TRADE	75				0.74
RETAIL TRADE	292	0.76	0.40**	0.47**	0.36**
HARDWARE AND BUILDING MATERIAL RETAILING	25		0.77	0.76	0.82
GENERAL MERCHANDISE STORES	13				0.45*
FOOD, BAKERY, AND DAIRY STORES	52		1.32	0.64	0.65
AUTOMOTIVE DEALERS AND SUPPLY STORES	48		0.56	0.94	0.85
GASOLINE SERVICE STATIONS	24		1.10		0.65*
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	41		1.03	1.64	0.70
EATING AND DRINKING PLACES	35				1.14
FINANCE, INSURANCE, AND REAL ESTATE	57	2.85**	0.46*	0.49*	1.04
INSURANCE	17				0.43**
BUSINESS AND REPAIR SERVICES	106		0.76	1.13	0.30**
AUTOMATIVE REPAIR AND SERVICES	69	0.94	1.70	2.11**	0.86
PERSONAL SERVICES	59		1.06	0.67	1.66**
LAUNDRY, CLEANING, AND GARMENT SERVICES	11				1.03
PROFESSIONAL AND RELATED SERVICES	194	0.54*	0.57**	0.48**	0.82
HOSPITALS	22				0.51**
OTHER HEALTH SERVICES	15				0.41**
ELEMENTARY AND SECONDARY SCHOOLS	58		0.51	0.95	0.35**
COLLEGES AND UNIVERSITIES	40		0.67		0.67*
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	38		0.94		0.58**
PUBLIC ADMINISTRATION	159	0.82	0.81	0.87	0.60*
					0.90

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CEREBROVASCULAR DISEASE

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-				ADJUSTED
		40-49	50-59	60-64	65-69	
CONSTRUCTION	228	2.03**	1.34	1.30	1.10	1.32**
MANUFACTURING	462	0.70	0.73*	0.57**	0.66**	0.66**
FOOD INDUSTRIES	31					1.12
YARN, THREAD, AND FABRIC MILLS	116		0.85	0.67	0.97	0.81
OTHER TEXTILE MILL PRODUCTS	11					0.19**
PAPER AND ALLIED PRODUCTS	15					0.64
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	14					0.87
CHEMICALS AND ALLIED PRODUCTS	10					0.46
LOGGING	16					1.78
SANMILLS, PLANING MILLS, AND MILLWORK	37		2.55**	1.63	1.24	1.74*
FURNITURE AND FIXTURES	52		0.87	0.50	0.53*	0.66*
PRIMARY IRON AND STEEL INDUSTRIES	11					2.95**
FABRICATED METAL INDUSTRIES	13					0.70
MACHINERY EXCEPT ELECTRICAL	23					0.48**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	13					0.38**
TRANSPORTATION EQUIPMENT	14					1.12
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	158	0.56	0.99	1.15	1.10	1.02
TRUCKING SERVICE AND WAREHOUSING	53		1.04	1.61	1.06	1.09
U.S. POSTAL SERVICE	10					0.43*
COMMUNICATIONS	5					0.27*
ELECTRIC AND GAS UTILITIES	14					0.68
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	28		3.59**			2.06**
WHOLESALE TRADE	42			0.42*	0.42**	0.39**
RETAIL TRADE	166	0.43*	0.84	0.79	0.89	0.79*
HARDWARE AND BUILDING MATERIAL RETAILING	13					0.77
GENERAL MERCHANDISE STORES	8					0.50
FOOD, BAKERY, AND DAIRY STORES	22		1.54		1.00	0.70
AUTOMOTIVE DEALERS AND SUPPLY STORES	33					0.88
GASOLINE SERVICE STATIONS	14					0.76
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	16				1.76	0.84
EATING AND DRINKING PLACES	27					1.58
FINANCE, INSURANCE, AND REAL ESTATE	25					0.36**
INSURANCE	6					0.21**
BUSINESS AND REPAIR SERVICES	52		0.60	0.93	0.88	0.81
AUTOMOTIVE REPAIR AND SERVICES	33			1.95	1.32	1.52
PERSONAL SERVICES	38		1.83		1.09	1.35
LAUNDRY, CLEANING, AND GARMENT SERVICES	9					1.27
PROFESSIONAL AND RELATED SERVICES	93	0.59	0.40**	0.64	0.38**	0.48**
HOSPITALS	15					0.54
OTHER HEALTH SERVICES	11					0.49
ELEMENTARY AND SECONDARY SCHOOLS	28			0.88		0.63
COLLEGES AND UNIVERSITIES	15					0.44*
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	9					0.29**
SOCIAL ADMINISTRATION	91		0.72	1.36	1.07	1.00

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ALL CANCER

INDUSTRY	TOTAL DEATHS	-RATIO OF	RATES & LEVEL OF	SIGNIFICANCE-ADJUSTED
CONSTRUCTION	1284	40-49	50-59	65-69
MANUFACTURING	2827	1.24	1.35**	1.41**
FOOD INDUSTRIES	140	0.80*	0.77**	0.74**
YARN, THREAD, AND FABRIC MILLS	770	0.59	0.94	0.80
OTHER, TEXTILE MILL PRODUCTS	91	1.10	1.15	0.89
PAPER AND ALLIED PRODUCTS	112		0.37**	0.31**
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	72		0.57*	1.11
CHEMICALS AND ALLIED PRODUCTS	101		0.88	0.82
LOGGING	84	0.68	0.75	1.05
SAWMILLS, PLANING MILLS, AND MILLWORK	128	1.80	2.36**	1.48
FURNITURE AND FIXTURES	296	1.33	1.44	0.80
PRIMARY IRON AND STEEL INDUSTRIES	73		0.64**	0.49**
FABRICATED METAL INDUSTRIES	83	1.36	2.85**	4.81**
MACHINERY EXCEPT ELECTRICAL	170	0.85	0.68	0.75
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	145	0.90	0.69*	0.57**
TRANSPORTATION EQUIPMENT	92		0.65*	0.70**
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	367	0.98	0.61	1.35*
TRUCKING SERVICE AND WAREHOUSING	100	1.30	0.90	1.04
U.S. POSTAL SERVICE	66		1.09	1.33**
COMMUNICATIONS	75		0.65	0.77
ELECTRIC AND GAS UTILITIES	71		0.72	0.65**
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	234	0.39**	0.52*	0.66**
WHOLESALE TRADE	921	0.87	0.90	0.73
RETAIL TRADE	73		0.39**	0.90
HARDWARE AND BUILDING MATERIAL RETAILING	41		0.88	0.39**
GENERAL MECHANISE STORES	155	0.96	0.70	0.79**
FOOD, BAKERY, AND DAIRY STORES	153	0.74	0.95	0.47**
AUTOMOTIVE DEALERS AND SUPPLY STORES	80		1.00	0.86
GASOLINE SERVICE STATIONS	102		0.96	0.73**
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	127	1.27	1.04	0.81
EATING AND DRINKING PLACES	237	0.46*	1.36	0.97
FINANCE, INSURANCE, AND REAL ESTATE	115		1.28	1.32*
INSURANCE	115		0.65**	0.62**
BUSINESS AND REPAIR SERVICES	379	1.30	0.79	0.72**
AUTOMATIVE REPAIR AND SERVICES	220	2.11**	1.11	1.07
PERSONAL SERVICES	177	1.29	1.89**	1.82**
LAUNDRY, CLEANING, AND GARMENT SERVICES	46		1.22	1.07
PROFESSIONAL AND RELATED SERVICES	548	0.48**	1.20	1.13
HOSPITALS	75		0.52**	0.50**
OTHER HEALTH SERVICES	70		0.42**	0.48**
ELEMENTARY AND SECONDARY SCHOOLS	156		0.67	0.55**
COLLEGES AND UNIVERSITIES	82		0.63*	0.61**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	94		0.37**	0.43**
PUBLIC ADMINISTRATION	463	0.74	0.53*	0.53**
			0.80	1.00

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF ESOPHAGUS

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
CONSTRUCTION	54		1.89*	1.98	1.65**
MANUFACTURING	88		0.64	0.85	0.63**
FOOD INDUSTRIES	7				1.34
YARN, THREAD, AND FABRIC MILLS	24			1.53	0.88
PAPER AND ALLIED PRODUCTS	5				1.16
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	1				0.32
CHEMICALS AND ALLIED PRODUCTS	3				0.55
LOGGING	7				4.13**
SAWMILLS, PLANING MILLS, AND MILLWORK	7				1.62
FURNITURE AND FIXTURES	8				0.52
PRIMARY IRON AND STEEL INDUSTRIES	2				2.24
FABRICATED METAL INDUSTRIES	2				0.49
MACHINERY EXCEPT ELECTRICAL	5				0.58
TRANSPORTATION EQUIPMENT	4				1.84
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	29		1.02		0.87
TRUCKING SERVICE AND WAREHOUSING	7				0.58
U.S. POSTAL SERVICE	3				0.57
COMMUNICATIONS	4				0.81
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	5				1.88
WHOLESALE TRADE	9		0.77		0.43
RETAIL TRADE	27				0.65
HARDWARE AND BUILDING MATERIAL RETAILING	2				0.57
FOOD, BAKERY, AND DAIRY STORES	2				0.65
AUTOMOTIVE DEALERS AND SUPPLY STORES	5				0.67
GASOLINE SERVICE STATIONS	3				0.79
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	2				0.56
EATING AND DRINKING PLACES	4				1.18
FINANCE, INSURANCE, AND REAL ESTATE	4				0.29
INSURANCE	4				0.70
BUSINESS AND REPAIR SERVICES	17				1.38
AUTOMATIVE REPAIR AND SERVICES	9				2.13
PERSONAL SERVICES	8				1.65
LAUNDRY, CLEANING, AND GARMENT SERVICES	2				1.71
PROFESSIONAL AND RELATED SERVICES	14				0.35**
HOSPITALS	4				0.72
OTHER HEALTH SERVICES	3				0.66
ELEMENTARY AND SECONDARY SCHOOLS	4				0.46
COLLEGES AND UNIVERSITIES	1				0.16
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	1				0.18
PUBLIC ADMINISTRATION	18				1.02

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF COLON, RECTUM AND ANUS

INDUSTRY	TOTAL DEATHS	-RATIO OF 40-49	RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
			50-59	60-64	65-69	
CONSTRUCTION	78		0.71	1.37	1.18	1.02
MANUFACTURING	221	0.95	0.65*	0.93	0.67*	0.76**
FOOD INDUSTRIES	14					1.22
YARN, THREAD, AND FABRIC MILLS	53		0.64	0.82	1.00	0.87
OTHER TEXTILE MILL PRODUCTS	9					0.41*
PAPER AND ALLIED PRODUCTS	8					0.85
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	12					1.74
CHEMICALS AND ALLIED PRODUCTS	8					0.87
LOGGING	3					0.75
SAWMILLS, PLANING MILLS, AND MILLWORK	6					0.70
FURNITURE AND FIXTURES	20					0.58
PRIMARY IRON AND STEEL INDUSTRIES	9					5.52**
FABRICATED METAL INDUSTRIES	8					1.00
MACHINERY EXCEPT ELECTRICAL	15					0.81
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	18					1.07
TRANSPORTATION EQUIPMENT	7					1.22
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	72		1.10	0.86	1.42	1.08
TRUCKING SERVICE AND WAREHOUSING	20					1.01
U.S. POSTAL SERVICE	2					0.17
COMMUNICATIONS	9					1.33
ELECTRIC AND GAS UTILITIES	8					0.84
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	5					0.91
WHOLESALE TRADE	20		0.89	0.62	0.69	0.43**
RETAIL TRADE	69					0.77
HARDWARE AND BUILDING MATERIAL RETAILING	3					0.42
GENERAL MERCHANDISE STORES	4					0.58
FOOD, BAKERY, AND DAIRY STORES	11					0.77
AUTOMOTIVE DEALERS AND SUPPLY STORES	12					0.75
GASOLINE SERVICE STATIONS	4					0.51
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	6					0.74
EATING AND DRINKING PLACES	13					1.76
FINANCE, INSURANCE, AND REAL ESTATE	38		1.89	1.26		1.32
INSURANCE	21					1.71
BUSINESS AND REPAIR SERVICES	19					0.67
AUTOMOTIVE REPAIR AND SERVICES	12					1.23
PERSONAL SERVICES	7					0.46
LAUNDRY, CLEANING, AND GARMENT SERVICES	2					0.57
PROFESSIONAL AND RELATED SERVICES	65	0.87	0.87	0.73	0.75	0.80
HOSPITALS	8					0.65
OTHER HEALTH SERVICES	7					0.70
ELEMENTARY AND SECONDARY SCHOOLS	17					0.86
COLLEGES AND UNIVERSITIES	9					0.59
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	18					1.36
PUBLIC ADMINISTRATION	46		1.13	1.19	1.28	1.18

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF PANCREAS

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
CONSTRUCTION	52		1.13	1.13	1.05
MANUFACTURING	149	1.02	0.77	0.75	0.89
FOOD INDUSTRIES	5				0.63
YARN, THREAD, AND FABRIC MILLS	42		1.44	0.96	1.10
OTHER TEXTILE MILL PRODUCTS	6				0.43
PAPER AND ALLIED PRODUCTS	6				0.95
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	2				0.45
CHEMICALS AND ALLIED PRODUCTS	5				0.90
LOGGING	5				2.00
SAWMILLS, PLANING MILLS, AND MILLWORK	2				0.29
FURNITURE AND FIXTURES	15				0.67
PRIMARY IRON AND STEEL INDUSTRIES	5				4.91**
FABRICATED METAL INDUSTRIES	4				0.73
MACHINERY EXCEPT ELECTRICAL	6				0.49
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	14				1.39
TRANSPORTATION EQUIPMENT	3				0.78
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	45		0.61	1.15	1.04
TRUCKING SERVICE AND WAREHOUSING	10				0.69
U.S. POSTAL SERVICE	12				1.98
COMMUNICATIONS	3				0.52
ELECTRIC AND GAS UTILITIES	4				0.70
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	4				1.05
WHOLESALE TRADE	17		1.17		0.57
RETAIL TRADE	44		0.80	1.03	0.75
HARDWARE AND BUILDING MATERIAL RETAILING	6				1.44
GENERAL MERCHANDISE STORES	4				0.89
FOOD, BAKERY, AND DAIRY STORES	6				0.65
AUTOMOTIVE DEALERS AND SUPPLY STORES	9				0.85
GASOLINE SERVICE STATIONS	3				0.66
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	6				1.11
EATING AND DRINKING PLACES	4				0.84
FINANCE, INSURANCE, AND REAL ESTATE	11				0.57
INSURANCE	7				0.91
BUSINESS AND REPAIR SERVICES	16				0.87
AUTOMATIVE REPAIR AND SERVICES	9				1.42
PERSONAL SERVICES	9				1.10
PROFESSIONAL AND RELATED SERVICES	35		1.03		0.65
HOSPITALS	1				0.13
OTHER HEALTH SERVICES	7				1.10
ELEMENTARY AND SECONDARY SCHOOLS	13				1.02
COLLEGES AND UNIVERSITIES	1				0.10
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	6				0.65
PUBLIC ADMINISTRATION	17				0.66

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF TRACHEA, BRONCHUS, AND LUNG

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
CONSTRUCTION	614	40-49	65-69
MANUFACTURING	1266	1.81**	1.45**
FOOD INDUSTRIES	60	0.73*	1.59**
YARN, THREAD, AND FABRIC MILLS	353	1.03	0.72**
OTHER, TEXTILE MILL PRODUCTS	40	1.33	0.91
PAPER AND ALLIED PRODUCTS	47	1.30*	1.04
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	27	0.35**	0.30**
CHEMICALS AND ALLIED PRODUCTS	42	0.54	0.85
LOGGING	27	1.04	0.67
SAWMILLS, PLANING MILLS, AND MILLWORK	43	0.75	0.79
FURNITURE AND FIXTURES	66	3.01**	1.57
PRIMARY IRON AND STEEL INDUSTRIES	29	1.97**	1.24
FABRICATED METAL INDUSTRIES	38	0.62*	0.50**
MACHINERY EXCEPT ELECTRICAL	59	1.32	4.57**
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	45	0.75	0.75
TRANSPORTATION EQUIPMENT	415	0.70	0.73*
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	183	0.53*	0.62
TRUCKING SERVICE AND WAREHOUSING	39	0.81	0.62
U.S. POSTAL SERVICE	21	0.85	1.47
COMMUNICATIONS	39	0.88	1.08
ELECTRIC AND GAS UTILITIES	36	1.32	1.52**
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	103	0.62	0.69
WHOLESALE TRADE	414	0.56	0.46**
RETAIL TRADE	32	0.36**	0.78
HARDWARE AND BUILDING MATERIAL RETAILING	19	0.86	1.02
GENERAL MERCHANDISE STORES	78	0.93	0.38**
FOOD, BAKERY, AND DAIRY STORES	62	0.81	0.80**
AUTOMOTIVE DEALERS AND SUPPLY STORES	44	0.93	0.74
GASOLINE SERVICE STATIONS	38	0.79	0.49*
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	58	1.20	0.98
EATING AND DRINKING PLACES	96	0.59*	0.66*
FINANCE, INSURANCE, AND REAL ESTATE	39	0.58	1.02
BUSINESS AND REPAIR SERVICES	184	1.11	0.80
AUTOMATIVE REPAIR AND SERVICES	113	0.83	1.35
PERSONAL SERVICES	71	1.61	0.56**
LAUNDRY, CLEANING, AND GARMENT SERVICES	19	0.79	0.54**
PROFESSIONAL AND RELATED SERVICES	205	0.58	1.18
HOSPITALS	23	1.09	2.12**
OTHER HEALTH SERVICES	27	1.83*	0.93
ELEMENTARY AND SECONDARY SCHOOLS	62	0.87	1.03
COLLEGES AND UNIVERSITIES	32	0.45**	0.42**
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	30	0.59	0.33**
PUBLIC ADMINISTRATION	204	0.37*	0.48**
		0.51	0.54**
		0.91	0.37**
		0.76	0.38**
			0.89

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CANCER OF PROSTATE

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
INDUSTRY					
CONSTRUCTION	63		1.44	0.94	1.20
MANUFACTURING	148		0.38**	0.81	0.71**
FOOD INDUSTRIES	7				0.86
YARN, THREAD, AND FABRIC MILLS	29			0.72	0.61*
OTHER TEXTILE MILL PRODUCTS	4				0.26*
PAPER AND ALLIED PRODUCTS	12				1.78
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	7				1.38
CHEMICALS AND ALLIED PRODUCTS	5				0.86
LOGGING	6				2.23
SAWMILLS, PLANING MILLS, AND MILLWORK	4				0.51
FURNITURE AND FIXTURES	15				0.60
PRIMARY IRON AND STEEL INDUSTRIES	2				1.45
FABRICATED METAL INDUSTRIES	9				1.82
MACHINERY EXCEPT ELECTRICAL	7				0.57
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	4				0.45
TRANSPORTATION EQUIPMENT	4				1.24
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	46			0.77	1.06
TRUCKING SERVICE AND WAREHOUSING	14				1.07
U.S. POSTAL SERVICE	8				1.21
COMMUNICATIONS	4				1.14
ELECTRIC AND GAS UTILITIES	7				0.73
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	3				0.30**
WHOLESALE TRADE	10		1.15	0.86	0.66*
RETAIL TRADE	43				0.75
HARDWARE AND BUILDING MATERIAL RETAILING	4				0.21
GENERAL MECHANISE STORES	1				0.63
FOOD, BAKERY, AND DAIRY STORES	6				0.61
AUTOMOTIVE DEALERS AND SUPPLY STORES	7				0.33
GASOLINE SERVICE STATIONS	2				0.86
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	5				0.94
EATING AND DRINKING PLACES	5				0.72
FINANCE, INSURANCE, AND REAL ESTATE	15				0.58
INSURANCE	5				1.03
BUSINESS AND REPAIR SERVICES	20			0.91	1.48
AUTOMATIVE REPAIR AND SERVICES	10				1.14
PERSONAL SERVICES	11				1.65
LAUNDRY, CLEANING, AND GARMENT SERVICES	4				0.51**
PROFESSIONAL AND RELATED SERVICES	31			0.48*	0.70
HOSPITALS	6				0.84
OTHER HEALTH SERVICES	6				0.72
ELEMENTARY AND SECONDARY SCHOOLS	10				0.38
COLLEGES AND UNIVERSITIES	4				0.38
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	4				1.38
PUBLIC ADMINISTRATION	37	1.77	1.43	1.24	

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

DIABETES MELLITUS

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49 50-59 60-64 65-69 ADJUSTED	
INDUSTRY	57	1.07	1.06
CONSTRUCTION	140	0.64	0.63
MANUFACTURING	13	0.68	0.55*
FOOD INDUSTRIES	38	1.05	1.61
YARN, THREAD, AND FABRIC MILLS	5		0.93
OTHER, TEXTILE MILL PRODUCTS	2		0.35
PAPER AND ALLIED PRODUCTS	3		0.28
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	2		0.63
CHEMICALS AND ALLIED PRODUCTS	7		0.19
LOGGING	6		2.62
SAWMILLS, PLANING MILLS, AND MILLWORK	13		1.01
FURNITURE AND FIXTURES	2		0.54
PRIMARY IRON AND STEEL INDUSTRIES	8		2.08
MACHINERY EXCEPT ELECTRICAL	6		0.59
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	7		0.55
TRANSPORTATION EQUIPMENT	44	0.64	1.94
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	18	1.00	0.90
TRUCKING SERVICE AND WAREHOUSING	5		1.13
U.S. POSTAL SERVICE	2		0.69
COMMUNICATIONS	4		0.38
ELECTRIC AND GAS UTILITIES	3		0.59
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	19		0.73
WHOLESALE TRADE	49	0.83	0.59
RETAIL TRADE	3	0.98	0.78
HARDWARE AND BUILDING MATERIAL RETAILING	9		0.74
FOOD, BAKERY, AND DAIRY STORES	10		0.90
AUTOMOTIVE DEALERS AND SUPPLY STORES	3		0.88
GASOLINE SERVICE STATIONS	5		0.55
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	11		0.96
EATING AND DRINKING PLACES	8		2.13
FINANCE, INSURANCE, AND REAL ESTATE	2		0.38*
INSURANCE	14		0.24
BUSINESS AND REPAIR SERVICES	7		0.72
AUTOMATIVE REPAIR AND SERVICES	12		0.72
PERSONAL SERVICES	1		1.05
LAUNDRY, CLEANING, AND GARMENT SERVICES	39		1.44
PROFESSIONAL AND RELATED SERVICES	4		0.41
HOSPITALS	4		0.67
OTHER HEALTH SERVICES	13		0.46
ELEMENTARY AND SECONDARY SCHOOLS	4		0.60
COLLEGES AND UNIVERSITIES	8		0.97
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	32		0.36
PUBLIC ADMINISTRATION			0.81
			1.17

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

PNEUMONIA AND INFLUENZA

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
CONSTRUCTION	114	40-49 2.82**	1.80**
MANUFACTURING	151	50-59 2.15**	1.21
FOOD INDUSTRIES	15	60-64 0.51**	0.59**
YARN, THREAD, AND FABRIC MILLS	43	0.43*	1.46
OTHER TEXTILE MILL PRODUCTS	2		0.78
PAPER AND ALLIED PRODUCTS	3		0.08**
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	4		0.55
CHEMICALS AND ALLIED PRODUCTS	6		1.72
LOGGING	9		1.05
SAWMILLS, PLANING MILLS, AND MILLWORK	18		0.57
FURNITURE AND FIXTURES	5		3.25
PRIMARY IRON AND STEEL INDUSTRIES	9		0.54
MACHINERY EXCEPT ELECTRICAL	6		0.39
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	6		1.29
TRANSPORTATION EQUIPMENT	41		0.67
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	13	0.60	0.75
TRUCKING SERVICE AND WAREHOUSING	2		0.22
U.S. POSTAL SERVICE	4		0.64
COMMUNICATIONS	3		0.42
ELECTRIC AND GAS UTILITIES	13		1.40
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	52	0.62	0.31**
WHOLESALE TRADE	3	0.60	0.62*
RETAIL TRADE	1		0.46
HARDWARE AND BUILDING MATERIAL RETAILING	7		0.17
GENERAL MERCHANDISE STORES	1		0.54
FOOD, BAKERY, AND DAIRY STORES	5		0.34
AUTOMOTIVE DEALERS AND SUPPLY STORES	5		0.66
GASOLINE SERVICE STATIONS	2		0.25
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	15		2.29*
EATING AND DRINKING PLACES	15		0.57
FINANCE, INSURANCE, AND REAL ESTATE	8	1.62	0.72
INSURANCE	26		1.08
BUSINESS AND REPAIR SERVICES	18		2.17*
AUTOMATIVE REPAIR AND SERVICES	14		1.17
PERSONAL SERVICES	4		1.41
LAUNDRY, CLEANING, AND GARMENT SERVICES	35	0.54	0.43*
PROFESSIONAL AND RELATED SERVICES	8		0.76
HOSPITALS	4		0.45
OTHER HEALTH SERVICES	7		0.40
ELEMENTARY AND SECONDARY SCHOOLS	8		0.60
COLLEGES AND UNIVERSITIES	4		0.32
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	27	0.80	0.76
PUBLIC ADMINISTRATION			

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE- 40-49	50-59	60-64	65-69	ADJUSTED
INDUSTRY	203		1.93**	1.60*	1.58**	1.66**
CONSTRUCTION	362	1.12	0.83	0.53**	0.77*	1.72**
MANUFACTURING	14					0.72
FOOD INDUSTRIES	119		1.62*	0.96	0.98	1.16
YARN, THREAD, AND FABRIC MILLS	8					0.19**
OTHER TEXTILE, MILL PRODUCTS	14					0.84
PAPER AND ALLIED PRODUCTS	8					0.66
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	3					0.19*
CHEMICALS AND ALLIED PRODUCTS	8					1.23
LOGGING	14					0.79
SANMILLS, PLANING MILLS, AND MILLWORK	66	1.45		0.79	1.20	1.10
FURNITURE AND FIXTURES	2					0.67
PRIMARY IRON AND STEEL INDUSTRIES	7					0.54
FABRICATED METAL INDUSTRIES	18					0.57
MACHINERY EXCEPT ELECTRICAL	15					0.58
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	11					1.29
TRANSPORTATION EQUIPMENT	113	0.76	1.10		1.15	1.03
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	45	0.83	1.87*		1.23	1.33
TRUCKING SERVICE AND WAREHOUSING	9					0.50
U.S. POSTAL SERVICE	12					1.08
COMMUNICATIONS	10					0.72
ELECTRIC AND GAS UTILITIES	9					0.85
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	26				0.28**	0.32**
WHOLESALE TRADE	107	0.61	0.80		0.64*	0.67**
RETAIL TRADE	4					0.31
HARDWARE AND BUILDING MATERIAL RETAILING	6					0.51
GENERAL MERCHANDISE STORES	15					0.60
FOOD, BAKERY, AND DAIRY STORES	15					0.53
AUTOMOTIVE DEALERS AND SUPPLY STORES	13					0.98
GASOLINE SERVICE STATIONS	14					0.99
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	18					1.43
EATING AND DRINKING PLACES	29		0.76		0.57	0.57*
FINANCE, INSURANCE, AND REAL ESTATE	12					0.59
INSURANCE	45	1.21		0.97		0.96
BUSINESS AND REPAIR SERVICES	30				0.89	0.89
AUTOMOTIVE REPAIR AND SERVICES	21				1.80	1.87**
PERSONAL SERVICES	7				1.08	0.89
LAUNDRY, CLEANING, AND GARMENT SERVICES	59		0.55*		0.39**	1.25
PROFESSIONAL AND RELATED SERVICES	15				1.17	0.40**
HOSPITALS	7					0.71
OTHER HEALTH SERVICES	11					0.40
ELEMENTARY AND SECONDARY SCHOOLS	9					0.33**
COLLEGES AND UNIVERSITIES	7					0.36*
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	52		0.85		0.92	0.28*
PUBLIC ADMINISTRATION						0.78

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

CHRONIC LIVER DISEASE AND CIRRHOSIS

INDUSTRY	TOTAL DEATHS	-RATIO OF 40-49 50-59 60-64	RATES & LEVEL OF 50-59 60-64 65-69	SIGNIFICANCE- 65-69	ADJUSTED
CONSTRUCTION	134	1.67*	1.49	1.70	1.59**
MANUFACTURING	210	0.61*	0.52**	0.55**	0.58**
FOOD INDUSTRIES	14				0.98
YARN, THREAD, AND FABRIC MILLS	60	1.03	0.79	1.13	0.93
OTHER, TEXTILE MILL PRODUCTS	2				0.08**
PAPER AND ALLIED PRODUCTS	8				0.68
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	3				0.37
CHEMICALS AND ALLIED PRODUCTS	6				0.50
LOGGING	5				1.07
SAWMILLS, PLANING MILLS, AND MILLWORK	9				0.95
FURNITURE AND FIXTURES	32		1.17		0.85
PRIMARY IRON AND STEEL INDUSTRIES	3				1.52
FABRICATED METAL INDUSTRIES	5				0.49
MACHINERY EXCEPT ELECTRICAL	8				0.34*
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	9				0.48
TRANSPORTATION EQUIPMENT	4				0.59
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	57	0.59	0.66	0.61	0.66*
TRUCKING SERVICE AND WAREHOUSING	25				0.93
U.S. POSTAL SERVICE	6				0.54
COMMUNICATIONS	1				0.08
ELECTRIC AND GAS UTILITIES	7				0.63
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	6				0.97
WHOLESALE TRADE	16				0.30**
RETAIL TRADE	84	0.97	1.01	0.56	0.86
HARDWARE AND BUILDING MATERIAL RETAILING	6				0.76
GENERAL MERCHANDISE STORES	3				0.37
FOOD, BAKERY, AND DAIRY STORES	17				1.11
AUTOMOTIVE DEALERS AND SUPPLY STORES	21		1.57		1.15
GASOLINE SERVICE STATIONS	6				0.76
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	8				0.93
EATING AND DRINKING PLACES	9				1.04
FINANCE, INSURANCE, AND REAL ESTATE	18				0.53*
INSURANCE	8				0.56
BUSINESS AND REPAIR SERVICES	38	1.95	1.47		1.21
AUTOMATIVE REPAIR AND SERVICES	25	3.52**	3.37**		2.36**
PERSONAL SERVICES	23				1.98*
LAUNDRY, CLEANING, AND GARMENT SERVICES	2				0.78
PROFESSIONAL AND RELATED SERVICES	43		0.37**	0.93	0.45**
HOSPITALS	8				0.58
OTHER HEALTH SERVICES	6				0.53
ELEMENTARY AND SECONDARY SCHOOLS	12				0.55
COLLEGES AND UNIVERSITIES	4				0.24*
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	4				0.25*
PUBLIC ADMINISTRATION	37		0.75		0.80

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

MOTOR VEHICLE ACCIDENTS

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED		
		40-49	50-59	60-64	65-69
INDUSTRY		1.60*	1.89**	1.70	1.08
CONSTRUCTION	133	0.67*	0.56**	0.55*	0.52*
MANUFACTURING	206				
FOOD INDUSTRIES	15				1.06
YARN, THREAD, AND FABRIC MILLS	56	1.13	0.78	1.02	0.94
OTHER TEXTILE MILL PRODUCTS	9				0.40*
PAPER AND ALLIED PRODUCTS	3				0.27
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	2				0.25
CHEMICALS AND ALLIED PRODUCTS	2				0.20
LOGGING	9				2.08
SAWMILLS, PLANING MILLS, AND MILLWORK	17				1.89
FURNITURE AND FIXTURES	31	1.04	0.85		0.86
PRIMARY IRON AND STEEL INDUSTRIES	3				1.87
FABRICATED METAL INDUSTRIES	4				0.32
MACHINERY EXCEPT ELECTRICAL	13				0.57
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	10				0.52
TRANSPORTATION EQUIPMENT	4				0.48
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	96	1.40	1.05	1.20	1.19
TRUCKING SERVICE AND WAREHOUSING	64	2.51**	1.96*		2.28**
U.S. POSTAL SERVICE	4				0.31
COMMUNICATIONS	3				0.29
ELECTRIC AND GAS UTILITIES	8				0.71
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	6				0.97
WHOLESALE TRADE	17		0.59		0.33**
RETAIL TRADE	64	0.68	0.80	0.66	0.68*
HARDWARE AND BUILDING MATERIAL RETAILING	8				1.19
GENERAL MERCHANDISE STORES	2				0.29
FOOD, BAKERY, AND DAIRY STORES	15				1.04
AUTOMOTIVE DEALERS AND SUPPLY STORES	11				0.62
GASOLINE SERVICE STATIONS	9				1.16
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	2				0.25
EATING AND DRINKING PLACES	7				0.83
FINANCE, INSURANCE, AND REAL ESTATE	12				0.36**
INSURANCE	6				0.44
BUSINESS AND REPAIR SERVICES	33	0.94	1.00		1.08
AUTOMOTIVE REPAIR AND SERVICES	21				2.02*
PERSONAL SERVICES	15				1.30
LAUNDRY, CLEANING, AND GARMENT SERVICES	4				1.41
PROFESSIONAL AND RELATED SERVICES	50	0.37**	0.54		1.04
HOSPITALS	6				0.54**
OTHER HEALTH SERVICES	7				0.45
ELEMENTARY AND SECONDARY SCHOOLS	10				0.68
COLLEGES AND UNIVERSITIES	11				0.45
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	10				0.65
PUBLIC ADMINISTRATION	31			1.57	0.67
					0.69

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

ALL OTHER ACCIDENTS AND ADVERSE EFFECTS

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-	ADJUSTED
CONSTRUCTION	197	40-49 2.52**	1.94**
MANUFACTURING	269	50-59 1.94**	1.46
FOOD INDUSTRIES	10	60-64 1.47	0.77
YARN, THREAD, AND FABRIC MILLS	61	65-69 0.58*	0.61**
OTHER TEXTILE MILL PRODUCTS	6		0.53
PAPER AND ALLIED PRODUCTS	4		0.75
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	3		0.19**
CHEMICALS AND ALLIED PRODUCTS	9		0.27*
LOGGING	26		0.30
SAWMILLS, PLANING MILLS, AND MILLWORK	28	5.52**	0.64
FURNITURE AND FIXTURES	33	6.10**	4.73**
PRIMARY IRON AND STEEL INDUSTRIES	6	2.93**	2.43**
FABRICATED METAL INDUSTRIES	8	0.70	0.70
MACHINERY EXCEPT ELECTRICAL	10		2.58
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	12		0.75
TRANSPORTATION EQUIPMENT	9		0.34**
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	78		0.48
TRUCKING SERVICE AND WAREHOUSING	31	0.68	1.15
U.S. POSTAL SERVICE	2	0.81	0.72*
COMMUNICATIONS	6		0.82
ELECTRIC AND GAS UTILITIES	15		0.19
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	17		0.51
WHOLESALE TRADE	82		1.03
RETAIL TRADE	9		0.79
HARDWARE AND BUILDING MATERIAL RETAILING	4		0.25**
GENERAL MERCHANDISE STORES	20	0.53*	0.66**
FOOD, BAKERY, AND DAIRY STORES	5	0.72	0.98
AUTOMOTIVE DEALERS AND SUPPLY STORES	11		0.42
GASOLINE SERVICE STATIONS	7		1.03
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	12		0.21**
EATING AND DRINKING PLACES	14		1.09
FINANCE, INSURANCE, AND REAL ESTATE	6		0.65
INSURANCE	29		1.09
BUSINESS AND REPAIR SERVICES	20	0.77	0.33**
AUTOMOTIVE REPAIR AND SERVICES	19	0.98	0.32*
PERSONAL SERVICES	4		0.73
LAUNDRY, CLEANING, AND GARMENT SERVICES	46		1.49
PROFESSIONAL AND RELATED SERVICES	9		1.22
HOSPITALS	6		1.10
OTHER HEALTH SERVICES	12	0.31**	0.38**
ELEMENTARY AND SECONDARY SCHOOLS	5		0.53
COLLEGES AND UNIVERSITIES	3		0.43
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	37		0.44*
PUBLIC ADMINISTRATION		0.73	0.22**
		0.51	0.45
			0.64*

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

SUICIDE

	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-				ADJUSTED
		40-49	50-59	60-64	65-69	
INDUSTRY	83	1.37	0.72	0.93	1.21	1.04
CONSTRUCTION	196	0.66*	0.68*	0.46**	0.62	0.62**
MANUFACTURING	16				1.22	1.22
FOOD INDUSTRIES	53	0.60	1.46		1.34	0.94
YARN, THREAD, AND FABRIC MILLS	8					0.37*
OTHER TEXTILE MILL PRODUCTS	7					0.71
PAPER AND ALLIED PRODUCTS	7					0.98
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	6					0.45
CHEMICALS AND ALLIED PRODUCTS	4					0.99
LOGGING	8					0.92
SAWMILLS, PLANING MILLS, AND MILLWORK	19					0.57
FURNITURE AND FIXTURES	8					4.74**
PRIMARY IRON AND STEEL INDUSTRIES	5					0.48
FABRICATED METAL INDUSTRIES	13					0.56
MACHINERY EXCEPT ELECTRICAL	10					0.61
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	2					0.36
TRANSPORTATION EQUIPMENT	73	0.57	1.42	0.95		0.97
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	27		1.55			1.08
TRUCKING SERVICE AND WAREHOUSING	5					0.50
U.S. POSTAL SERVICE	8					0.88
COMMUNICATIONS	9					0.92
ELECTRIC AND GAS UTILITIES	8					1.36
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	20					0.42**
WHOLESALE TRADE	72	0.88	0.91	0.67	0.76	0.83
RETAIL TRADE	9					1.31
HARDWARE AND BUILDING MATERIAL RETAILING	3					0.43
GENERAL MERCHANDISE STORES	6					0.42
FOOD, BAKERY, AND DAIRY STORES	16					0.98
AUTOMOTIVE DEALERS AND SUPPLY STORES	2					0.28
GASOLINE SERVICE STATIONS	13					1.67
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	8					1.01
EATING AND DRINKING PLACES	27					1.01
FINANCE, INSURANCE, AND REAL ESTATE	11					0.84
INSURANCE	11					0.84
BUSINESS AND REPAIR SERVICES	30		1.36			1.08
AUTOMOTIVE REPAIR AND SERVICES	17					1.81
PERSONAL SERVICES	17					1.42
LAUNDRY, CLEANING, AND GARMENT SERVICES	7					2.37
PROFESSIONAL AND RELATED SERVICES	51	0.96	0.50			0.62*
HOSPITALS	7					0.59
OTHER HEALTH SERVICES	6					0.66
ELEMENTARY AND SECONDARY SCHOOLS	7					0.36*
COLLEGES AND UNIVERSITIES	10					0.65
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	8					0.66
PUBLIC ADMINISTRATION	35		0.78	1.31		0.85

NORTH CAROLINA RESIDENT MALE DEATHS FOR THREE YEARS

1984 - 1986

HOMICIDE

INDUSTRY	TOTAL DEATHS	-RATIO OF RATES & LEVEL OF SIGNIFICANCE-			ADJUSTED
		40-49	50-59	60-64	
CONSTRUCTION	84	2.46**	2.52**	65-69	2.37**
MANUFACTURING	82	0.43**	0.63		0.49**
FOOD INDUSTRIES	4				0.60
YARN, THREAD, AND FABRIC MILLS	18				0.64
OTHER TEXTILE MILL PRODUCTS	2				0.19
PAPER AND ALLIED PRODUCTS	2				0.35
CHEMICALS AND ALLIED PRODUCTS	4				0.67
LOGGING	6				2.92*
SAWMILLS, PLANING MILLS, AND MILLWORK	6				1.55
FURNITURE AND FIXTURES	11				0.67
PRIMARY IRON AND STEEL INDUSTRIES	2				2.27
FABRICATED METAL INDUSTRIES	5				0.97
MACHINERY EXCEPT ELECTRICAL	3				0.22*
ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES	4				0.49
TRANSPORTATION EQUIPMENT	1				0.25
TRANSPORTATION, COMMUNICATION, OTHER PUBLIC UTILITIES	34	1.09			0.87
TRUCKING SERVICE AND WAREHOUSING	15	1.55			0.96
U.S. POSTAL SERVICE	1				0.22
COMMUNICATIONS	2				0.33
ELECTRIC AND GAS UTILITIES	4				0.80
WATER SUPPLY, SANITARY SERVICES, NOT SPECIFIED UTILITIES	4				1.45
WHOLESALE TRADE	8				0.33*
RETAIL TRADE	40	0.92	1.00		0.96
GENERAL MERCHANDISE STORES	1				0.33
FOOD, BAKERY, AND DAIRY STORES	8				1.16
AUTOMOTIVE DEALERS AND SUPPLY STORES	5				0.61
GASOLINE SERVICE STATIONS	6				1.69
FURNITURE, HOME FURNISHINGS, AND APPLIANCE STORES	3				0.81
EATING AND DRINKING PLACES	8				2.03
FINANCE, INSURANCE, AND REAL ESTATE	5				0.33
INSURANCE	2				0.32
BUSINESS AND REPAIR SERVICES	17	1.55			1.18
AUTOMATIVE REPAIR AND SERVICES	8				1.60
PERSONAL SERVICES	15				2.82**
LAUNDRY, CLEANING, AND GARMENT SERVICES	4				3.09
PROFESSIONAL AND RELATED SERVICES	17				0.40**
HOSPITALS	1				0.17
OTHER HEALTH SERVICES	2				0.45
ELEMENTARY AND SECONDARY SCHOOLS	9				0.89
COLLEGES AND UNIVERSITIES	2				0.27
SOCIAL SERVICES, RELIGIOUS, & MEMBERSHIP ORGANIZATIONS	2				0.38
PUBLIC ADMINISTRATION	13				0.61



3 3091 00747 9462

Department of Human Resources
Division of Health Services
State Center for Health Statistics
P.O. Box 2091
Raleigh, N.C. 27602-2091
919/733-4728

BULK RATE
U.S. Postage
PAID
Raleigh, N.C. 27602-2091
Permit No. 1862

LIBRARY ASSISTANT (CY 2 OF 5)
STATE DOCUMENTS CLEARINGHOUSE
ARCHIVES/LIBRARY BUILDING
RALEIGH, NC INTEROFFICE